

Health of Plymouth

DURING THE YEAR 1909.

BY

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Plymouth:
UNDERHILL & Co., PRINTERS, FRANKFORT STREET
AND CENTRAL EXCHANGE WORKS, WHIMPLE STREET.

1910.

CONTENTS.

I.

	PAGES
Report for the Year	7-14
General Sanitary Conditions	15-19
Area, Population, Boundaries, Rateable Value, Inhabited Houses	15
Site and Soil	16
Water Supply	17
Sewage Disposal and Drains	17
Vital and Mortal Statistics	20-22
Marriages, Births, Deaths, etc.	20-22
Infantile Mortality	29
Localized Mortality Table	22-23
Comparitive Mortality Table	25
Mortality at different Seasons	22
Table I., shewing the estimated Population, Marriages, Births and Deaths for the year 1909, and ten years preceding	26
Table II., shewing the Density, Birth-rate, Death-rate, Zymotic-rate, and Infantile Death-rate for the year 1909, and ten years preceding	27
Table III., shewing the number of Deaths from the principal Zymotic Diseases for the year 1909, and ten years preceding	28
Table IV., shewing the Relative Mortality Rates from the principal Zymotic Diseases for the year 1909, and ten years preceding	29

PAGES

Certification of Causes of Death 30

Tables shewing Causes of Death at different periods of life in the Borough 31-43

Prevalence of Disease 44-48

Small Pox 44

Diphtheria 45

Scarlet Fever 45

Enteric or Typhoid Fever 46

Diarrhœa 47

Measles 46

Whooping Cough 46

Borough Hospital 47

Cases treated at Mount Gould Hospital 49

Cases admitted to Mount Gould Hospital 50

Notification of Infectious Diseases Tables 51-52

Monthly Table of Deaths from all causes and Zymotic Eiseases, with the rate per 1,000 per annum .. 53

II.

Report of Borough Analyst 54-56

Report of Port Medical Officer 57-66

Table I., Number of Vessels inspected during the year 1909 67

Table II., Number and Nationality of the Vessels inspected 68

Table III., Number of Cases removed from Vessels for treatment during the year 1909 69

Table IV., Return of Vessels inspected, tonnage, crew, passengers, arrivals, sickness, etc., from the year 1891 to 1908 70

PAGES

Summary for the year 1909 71

Detailed List of Sanitary Defects for the year 1909 .. 71-73

Cases of Sickness reported to the Port Sanitary Officials and seen by the Medical Officer during the year 1909 75-93

III.

Meteorological Report 94-98

Result of observations made during the year 99

Meteorological Tables and Remarks 100-115

Causes of Death during the year 1909, classified according to Diseases, Ages, and Localities 116

Cases of Infectious Disease notified during the year 1908, classified according to Diseases, Ages, and Localities 117

Vital Statistics of the Borough during the year 1909, and previous years 118

Infantile Mortality during the year 1909—Deaths from stated causes in weeks and months, under one year of age 119

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REPORT

FOR THE YEAR 1909.

MEDICAL OFFICER OF HEALTH'S OFFICE,
February, 1910.

To the CHAIRMAN and MEMBERS of the
SANITARY COMMITTEE of the
COUNTY BOROUGH of PLYMOUTH.

GENTLEMEN,

I beg to present to you my Annual Report, which deals with the vital statistics and sanitary condition of the Borough for the year 1909.

HOUSING OF THE WORKING CLASSES ACT.—Under Part II. of this Act two houses were certified as being in a state so injurious to health as to be unfit for human habitation, viz., 41 and 63 Southside Street. The usual notices have been served on the owners, requiring them, within twenty-eight days, to make the premises fit for habitation. In both instances the notices were under consideration at the close of the year. The following table summarizes the action which has been taken in the matter since 1890:—

Year.	Condemned on Certificate of M.O.H.	Improved in consequence.	Closed.
1891.	22	10	12
2.	14	6	8
3.	7	4	3
4.	8	7	1
5.	11	6	5
6.	22	14	8
7.	3	1	2
8.	6	4	2
9.	16	9	7
1900.	28	27	1
1.	9	9	—
2.	2	1	1
3.	8	8	—
4.	5	3	2
5.	10	7	3
6.	25	24	1
7.	2	0	2
8.	—	—	—
9.	2	—	—

Baths and Washhouses.—The number of persons using the baths in 1909 was 7113, against 6632 in the preceding year. There were 748 tickets issued at 1s.; 2739 at 6d.; 2398 at 4d.; and 1228 at 2d.

Disinfecting Station.—During the year 5928 articles of clothing, bedding, etc., have been dealt with, and some 971 rooms have been disinfected. Large articles, such as bedding, clothing, etc., are disinfected by the high pressure steam disinfector at the Borough Hospital, and the method adopted for purifying dwellings after infectious disease is by means of spray, formaldehyde solution being used. One ounce of 40 per cent. formaldehyde to each pint of water makes a two per cent. solution. The directions given are:—The walls should be sprayed first, commencing at the bottom and working upwards, then the ceiling, and finally the furniture and

floor. About six pints of liquid suffice for a room of one thousand feet.

Mortuary and Coroner's Court.—The mortuary in Vauxhall Street is for the reception of the bodies of persons who have been drowned, killed, etc., and over which the Coroner has to hold inquests. Bodies are taken there by the police, and when it may be necessary to make post-mortem examinations, any medical practitioner may have the assistance of an attendant on sending a communication to the Health Department.

During the past year 73 inquests have been held at the Court, and 57 post-mortem examinations performed. The bodies deposited at the mortuary were removed from the various Wards of the borough as follows:—

St. Peter's	...	5	Charles	...	7
Millbay ...	...	16	Greenbank	...	1
Hoe ...	...	4	Mutley	...	2
St. Andrew's	...	9	Compton	...	1
Vintry ...	...	10	Laira	...	2
Frankfort	...	4	Friary	...	3
Drake's ...	...	4	Sutton	...	3

Notification of Infectious Disease.—It is gratifying to again observe that the borough has been free from any epidemic, and that the sickness rate of 3.94 compares favourably with an average of 5.73 for the last ten years. The 490 cases notified happened in all parts of the borough, and no less than 54.5 per cent. of the total cases were reported in the last four months of the year.

The fees paid to medical practitioners for notification totalled £64 19s. 6d., as against £45 15s. 6d. in the previous year. In addition to the 490 cases referred to, there were 93 cases of pulmonary tuberculosis notified, 43 of which were poor-law patients.

The Local Government Board issued a set of Regulations in December, 1908, dealing with Tuberculosis. The Regulations, which came into force on January 1st, 1909, provide for the notification to the Medical Officer of Health of tuberculosis in the case of any poor person who is an inmate of a Poor-Law institution, of any such person under the care of a district medical officer; also for giving notice to the Medical Officer of Health of the change of address of such poor persons.

I trust that much will be done to lessen the heavy death toll from tuberculosis by the adoption of the above Regulations. Each case of tuberculosis is investigated by the health visitors, who give instructions on the personal precautions to be taken, on the way the house must be kept, etc., and she dwells on the paramount claims of fresh air and cleanliness. She leaves with the friends of the patient a printed set of instructions. In addition, any sanitary defects found are noted with a view to remedy, and disinfection of the house by the staff of the Health Office is carried out after deaths, and upon change of address. Whilst on this subject, I should like to refer to a question recently asked in Parliament.

In October last, the First Lord of the Admiralty was asked in the House of Commons to state the number of men discharged from the Navy during the years 1899 to 1908 suffering from tuberculosis; whether, on their discharge, any provision for the treatment of the disease in a home or hospital was made by his department on their behalf. Mr. McKenna answered:—"The number of officers and men finally invalided from the service (including marines) for tuberculosis for the years 1899 to 1908 is 2673, made up as follows:—1899, 207; 1900, 165; 1901, 232; 1902, 288; 1903, 334; 1904, 353; 1905, 331; 1906, 214; 1907, 266; 1908, 283. No special provision is made for their treatment on their discharge in a home or hospital."

I would venture to suggest that this answer from the point of view of preventive medicine, and as more widely affecting

all sections of the community is extremely unsatisfactory. It is appalling when one considers the great amount of harm likely to be wrought by these men being set adrift to intermingle with the public at large and thereby convey this disease, which is without doubt communicable under certain circumstances, probably to persons predisposed constitutionally to contract the disease. This deeply concerns the public, whose welfare is inseparably connected with all that tends to improve the health of the community at large; and consequently every encouragement, consistent with the regard due to other interests, should be given this important matter by the Government, and I would suggest that representation be made to the President of the Local Government Board that the health of the inhabitants of naval ports is endangered by the continuance of this practice. If these men on being invalided from the service were admitted to a sanatorium and there instructed on the best means adopted for the cure of or retardation of the disease and for the protection of the public health, it would to a great extent minimise the risks of the spread of this disease.

General and Systematic Inspection.—The systematic house-to-house inspection of the borough has been carried out as far as practicable, 7717 visitations having been made, and the condition of drains, state of repair, and other items recorded. By far the greater number of defects discovered in the course of these inspections relate chiefly to choked drains, foul w.c.'s, and absence of limewashing and cleansing..

During the year 22,283 visits of inspection have been made by the male inspectors, 1816 house drains have been tested, 987 notices served for abatement of nuisances, 849 of which have been complied with, leaving 138 nuisances unabated. The result of this work has been that 3135 sanitary improvements have been effected. The amount received in fees for testing drains was £9 3s. 6d.

Health Visitors.—The summary of the work of the two Health Visitors during the past twelve months is as follows:—

Number of families visited		7425
,, visits to Phthisis cases	...	167
,, visits to midwives		141
,, re-visits		1076
,, notices issued		260
,, notices complied with	...	175

The total number of visits include those made in connection with the "Prize Baby Competition," initiated by the Mayor (A. Edmund Spender, Esq.), who offered to present prizes to each of the five healthiest boys and five healthiest girls born during the first three months of his mayoralty.

Some eighty-eight babies were entered in the competition, and from time to time between the months of January and November the infants participating in the competition were visited at their homes by the Health Visitors, and particulars as to the progress made by the child duly noted.

The judging of the infants, which was undertaken by three ladies, viz., Mrs. C. E. Russel Rendle, Miss Mabel Ramsay, M.B., and Miss Mary Parkin, took place early in November, when fifty-seven babies presented themselves for examination.

I may say that the object underlying the giving of these prizes is to instil mothers to take greater care of their children, with a view to reducing the infantile death-rate in the borough.

Dairies, Cowsheds, and Milkshops.—In August last the two senior Inspectors of Nuisances were appointed to take charge of these premises, and also to carry out the duties of the office of Workshops' Inspector. I give a brief summary of the work done by them during that time. Under the Dairies, Cowsheds and Milkshops regulations, five hundred and seventy-eight visits were made. Bakehouses on the register number seventy-seven, the inspection of which was carried out in September, and with few exceptions the cleansing and lime-washing had been done. In all one hundred visits were paid to these premises.

Factory and Workshops Act, 1901.—The following statement shows the amount of work carried out in connection with factories, workshops, workplaces, and homework in 1909:—

Visits to Factories	4
,, Workshops	196
,, Laundries	12
,, Bakehouses	100
,, Domestic Workshops ...	291
Total number of visits paid ...	603
Notices served for want of cleanliness ...	8
,, for insufficient sanitary accommodation	5
Total number of notices served ...	13

There are at present 674 registered workshops in the borough, comprising:—

Bakehouses	77
Dressmakers and Milliners	96
Carpenters and Joiners	68
Laundries	12
Tailors	93
Miscellaneous	328
	674

Food and Drugs Act.—Samples taken under the Sale of Food and Drugs Acts during the year totalled 242, and the number found to be adulterated was nine. Proceedings were taken in five instances, and fines amounting, with costs, to £31 7s. were imposed. Twelve samples of milk were taken at the railway stations and depôts in course of delivery.

Food Inspection.—During the year the Meat Inspector has made 723 visits to butchers' shops. The total number of carcases inspected was as follows:—

Cattle (quarters of beef)	60,938
Pigs	27,006
Sheep and Lambs	31,322
Calves	3,388

Fish inspected at the Barbican by your Inspector during the past twelve months totalled 6977 tons $7\frac{1}{4}$ cwt., as against 6610 tons $3\frac{3}{4}$ cwt. in 1908.

The quantity of unwholesome food condemned and destroyed during the year was as follows:—

	Tons	Cwts.	Qrs.	Lbs.
Fish	12	7	1	—
Fruit	0	15	0	8
Potatoes	1	0	0	0
Carrots, turnips, and onions	0	3	3	0
Meat	96	15	1	7
Preserved Fruit ...	14 tins.			
Eggs	100			

I am, Gentlemen,

Your obedient Servant,

F. Jn. Williams

Medical Officer of Health.

General Sanitary Condition of the County Borough of Plymouth, at the end of the Year, 1909.

Borough of Plymouth—Area—Population—Boundaries—Rateable Value—Inhabited Houses.

The area of the Borough is 2,370 acres, which includes the island of St. Nicholas, in the parish of St. Andrew. Population calculated to the middle of 1909, 124,180.

The Borough consists of three districts—Plymouth North, Plymouth South-east, and Plymouth South-west for registration purposes, and are sub-divided into fourteen wards, for the purposes of these statistics, viz., St. Peter's, Millbay, Hoe, St. Andrew's, Vintry, Frankfort, Drake's, Sutton, Charles, Greenbank, Mutley, Compton, Laira, and Friary.

The limits of the Urban Sanitary District are co-terminus with those of the County Borough of Plymouth.

The district is bounded on the north by the parishes of Egg Buckland and Stoke Damerel, on the west by the township of East Stonehouse, on the south by the waters of the Sound, on the east by the parish of Egg Buckland.

The rateable value of the Borough is £572,617.

Inhabited Houses.—There are about 15,786 houses in the Borough; 130 have been built during the year.

Site and Soil.

The town of Plymouth is situate in Lat. 50° 22′ N., Long. 4° 10′ W. The site of the town is on the southern slope of the foot-hills of Dartmoor. The town with its environs stands upon the slate and limestone of the middle Devonian series.

The limestone forms a broad band next the sea, broken through at the entrance of Stonehouse Pool, Millbay, Sutton Pool, and by the Plym. It rises to the height of 320 feet, the slate hills to the north reaching that height within the area of the Borough at Hartley. The junction of the limestone with the slate runs roughly parallel on the line of the Millbay Road and George Street, crossing that line to the northward on the west, and to the southward on the east; along this junction are the most productive wells in the district, though there are many good ones also in the slate.

At the north-western corner of St. Andrew's Churchyard there rises a boss of volcanic rock—and interbedded lava—known as dunstone, which occurs in considerably quantity immediately on the outskirts of the Borough at Mannamead. There is also a considerable area of low-lying alluvial ground in the vicinity of the Octagon extending thence on all sides. This formed part of the ancient bed of Surpool, and retained a marshy character in part until recently. Much of it is below the level of high water spring tides, and where the alluvium lies deepest, its depth has not been ascertained.

There is also a belt of low reclaim land around Sutton Pool, but of less practical importance from a geological point of view. The limestone rocks are compact in themselves, but broken by frequent joints and fissures, and contain numerous caverns, which provide a system of underground drainage.

The slate rocks vary considerably in character, from the loose broken material locally known as "shillet" to the compact red and purple slates, which is locally distinguishable by the absence of water-bearing qualities. As a rule, however,

the slate rocks admit freely of percolation of rain and sewage, and the shallower wells sunk in them should be carefully examined if intended for potable purposes. Some of the deeper wells, however, yield both an abundant and an excellent supply.

The alluvial area excepted, the geological condition of Plymouth and the contours are singularly favourable for the site of a large town; the subsoil, as a rule, is shallow, particularly on the limestone.

Water Supply.

The Waterworks of Plymouth belong to the Corporation. The supply of water is entirely by gravitation, and is obtained from the upper reaches of the watershed of the River Meavy, on Dartmoor. The gathering ground is about 4,885 acres, or 7½ square miles in extent, and lies between 700 and 1,700 feet above the sea level. The rocks composing it are of igneous origin, mostly granitic, but a small area is of the altered Devonian.

The water is impounded in a storage reservoir, having a capacity of six hundred and fifty-seven million gallons, equal to 112 days' supply for 139,575 persons. The distance from the reservoir to the town is about twelve miles, the water being conducted by iron pipes.

The water is very soft—1½ degrees of hardness—and is eminently suitable for domestic and trade supplies. The quantity supplied per head, including that for trade purposes, is 42 gallons.

Sewage Disposal and Drainage.

The sewage of the town is discharged into the Sound by four outfalls at different points. The sewage receives no chemical treatment before its discharge.

The Borough for drainage purposes is divided into five drainage areas, having four outfalls.

The largest area called the Eastern High Level area of about 1300 acres, which drains the eastern half of the town and a portion of the western, taking the Tavistock Road as the dividing line. The sewage from this district is dicharged by an outfall 6 ft. in diameter at Rusty Anchor, West Hoe, the depth of the pipes at the outlet being 71 ft. 6 in. below low water mark of ordinary spring tides. The sewage is only discharged on the ebb tide, it is accumulating during the flood tide in large impounding tanks and sewers.

The district in the neighbourhood of the Octagon forms the Western Low Level area of about 107 acres, and this also discharges at Rusty Anchor through an outfall 4 ft. in diameter at about the same level as the 6 ft., the sewage during the flood tide being impounded in tanks under the Wharf of the Great Western Railway Docks.

Vintry Ward and neighbourhood of about 75 acres forms another area called the Eastern Low Level area, the sewage from this area being impounded through a 3 ft. outfall at Fishers' Nose at a depth of about 33 ft. below low water mark of ordinary spring tides.

The area taking in Peverell estate and the western portion of Mutley about 427 acres is called the North-western High Level district, and discharges via Victoria Park sewer into the Sound at Rusty Anchor, West Hoe, through the 4 ft. outfall; during the flood tide the sewage is retained in the sewers.

The remaining portion forming a small area at Cattedown which drains into the Cattewater at Carpenter's Rock through a 4 ft. outfall at a depth of about 13 ft. 6 in. below low water mark of ordinary spring tides. The sewage in this district is also retained in the sewers and discharged only on the ebb tide.

The old sewage tanks at Laira are not now used, being disconnected from the sewerage system, but the concrete sewer and outfall constructed by the old Compton Local Board is still in use for storm water only, and discharges into the Laira at Arnold's Point.

The work of reconstruction of defective subsidiary sewers has been continued and four of the districts completed; work in other districts now proceeding.

VITAL AND MORTAL STATISTICS.

AREA.—The Borough of Plymouth contains 2370 acres, or rather more than 3.7 square miles; excluding inland water, it is 2352 acres.

POPULATION.—The general method of estimating the population of a town in a given year is that used by the Registrar-General. This assumes that the rate of increase since the last census is the same as was the rate of increase during the ten years between the last census and that immediately preceding it.

Calculated on this basis, the population of the Borough in the middle of 1909 was 124,180.

The increase over 1908 is 2067 on the estimated population, whilst the natural increase, the excess of births over deaths is 953, as compared with 818 in 1908.

DENSITY OF POPULATION.—The mean density of population is 52.8 persons per acre, and an average of 7.86 persons in each house.

MARRIAGES.—The number of marriages has been 987, giving a rate of 15.89 per 1000 population. This rate is lower than any of the ten years 1899-1908, the average being 18.04.

BIRTHS.—In the year 1909 the returns of the local registrars recorded 2814 births, as follows:—

Registrar's Sub-District		Males	Females	Total	Birth-rate per 1000
Plymouth South-west	...	617	613	1230	22.3
,, North ...	...	410	344	754	22.4
,, South-east	...	426	404	830	23.3
Total	...	1453	1361	2814	22.6

The birth-rate for the year has therefore been 22.66 per 1000 living against a mean rate of 25.46 during the preceding ten years.

The birth-rate in the borough has been steadily decreasing since 1898, when it was 28.7 per 1000. That for the year under consideration shows only a slight increase on the rate of 1908—22.20—which is the lowest birth-rate in the borough of which I have record.

In each 1000 births registered, the proportion equalled 516.35 males, and 483.65 females.

There were 124 illegitimate births registered, or 4.40 per cent. of the total. In 1908 the percentage was 3.76, and in 1907 3.89. Thirty-three illegitimate children died, or 9.14 per cent. of the deaths under one year of age.

Death-rate of infants (legitimate) per 1000 births = 122.7
,, ,, (illegitimate) ,, ,, = 266.1

DEATHS.—There were 1861 deaths registered during the year; of these 62 were of non-residents registered within the district, such as deaths of other than actual residents occurring in the South Devon and East Cornwall Hospital and the like institutions. Further there were 18 deaths of Plymouth residents in the Blackadon Asylum. The actual number of deaths therefore which have to be regarded in estimating the death-rate is 1799, giving a recorded death-rate of 14.48. This is slightly lower than the death-rate for 1908, viz., 15.0, and is the lowest on record, and also lower than the average for the last ten years 1889-1908, which was 17.51.

The death-rate for the year in the 76 great towns was 14 7.

The following table shows the deaths in each of the four quarters of the year:—

	Males	Females	Total	Annual Rate per 1000.
First Quarter	282	287	569	18.32
Second ,, ...	228	228	456	14.68
Third ,, ...	172	190	362	11.66
Fourth ,, ...	233	241	474	15.26
Year ...	915	946	1861	14.98

Of the 1861 deaths registered 332 or 17.84 per cent. took place either in hospitals, in workhouses, or in asylums. The percentage in the several classes of institutions were as follows:—

6.8 per cent. in hospitals.
10.0 ,, in workhouses.
1.0 ,, in asylums.

The mean age at death in 1909 among males was 37 years 1 month, and that of females 41 years 5 months.

LOCALISED MORTALITY RATE.—There has been no localised epidemic calling for special enquiry. The deaths in the various wards are set out in detail in Table IV. (appended to this Report). From all causes the death-rates vary from 9.55 per thousand in Hoe Ward to 19.20 in Compton Ward.

The highest zymotic rate, 1.84 per thousand, was in Vintry Ward; and Hoe Ward has the lowest zymotic rate, which was 0.11 per thousand living.

page 28

The following table gives the death-rates for each Ward from all causes and from zymotic diseases. For comparison, the figures for the previous year are also given.

Comparative Mortality Table.

Shewing the Estimated Population, Birth-rate, Death-rate, Zymotic-rate, and Infantile Death-rate of 20 large towns of England and Wales for the year 1909:—

Cities and Boroughs.	Estimated Population in the middle of 1909.	Birth-rate.	Death-rate.	Zymotic rate.	Deaths under 1 year to 1000 Births.
76 Large Towns ...	16,445,281	25·7	14·7	1·42	118
London	4,833,938	24·4	14·0	1·30	107
Liverpool	760,357	31·1	19·0	2·11	144
Manchester	655,435	27·8	17·9	1·82	134
Birmingham	563,629	26·6	15·4	2·02	134
Leeds	484,012	22·8	14·1	0·80	121
Sheffield	470,958	28·1	15·0	1·79	118
Bristol	377,642	22·6	12·7	0 87	100
Newcastle-on-Tyne ...	281,584	27·3	14·8	1·22	120
Hull	275,552	29·4	14·9	1·37	114
Nottingham	263,443	25·6	16·2	1·68	150
Leicester	244,255	21·9	12·9	1·22	127
Portsmouth	214,726	27·2	14·2	1·41	95
Cardiff	195,303	25·8	13·1	0·84	104
Bolton	187,824	24·7	15 1	1·14	129
Sunderland	159,378	29·3	16·9	1·99	136
Blackburn	136,959	22·9	16·2	1·49	127
Derby	129,411	24·8	13·3	1·23	123
Plymouth	**124,180**	**22·6**	**14·5**	**1·18**	**128**
Preston	118,519	25·7	15·8	1·31	136
Wolverhampton ...	104,633	23·8	15·9	2·29	138

TABLE I.

Shewing the Estimated Population, Marriages, Births, and Deaths for the year 1909, and 10 years preceding.

* Year.	Estimated Population.	Marriages.	Registered Births.	Number of Deaths.		
				All Ages.	Under 1 year.	Principal Zymotic Diseases.
1909	124,180	987	2814	1861	361	147
1908	122,113	1034	2712	1894	351	114
1907	120,063	985	2777	1802	306	91
1906	118,014	997	2821	1943	436	231
1905	116,000	984	2956	1976	405	154
1904	114,003	1055	2888	2137	500	282
1903	112,022	1071	2847	1857	413	116
1902	110,066	943	2957	1870	460	190
1901	107,974	1013	2889	1939	434	159
1900	105,960	979	2849	2102	498	231
1899	103,980	1036	2982	2198	566	185
Averages for years 1899-1908.	113,019	1009	2867	1971	436	175

* For statistical purposes the Registrar-General estimates the population to the middle of the year, on the basis of the rate of increase ruling between the two preceding census periods.

TABLE II.

Shewing the Density, Birth-rate, Death-rate, Zymotic-rate and Infantile Death-rate for the year 1909, and 10 years preceding.

YEAR.	Persons to an Acre.	Birth-rate.	Death-rate.	Zymotic-rate.	Deaths under 1 year to 1,000 Births.
1909	52·8	22.66	14·98	1·18	128
1908	51·9	22·20	15·51	0·93	129
1907	51·0	23·13	15·00	0·75	110
1906	50·1	23·90	16·46	1·95	154
1905	49·3	25·48	17·03	1·33	137
1904	48·4	25·33	18·74	2·47	173
1903	47·6	25·42	16·57	1·04	144
1902	46·8	26·86	16·99	1·72	155
1901	45·8	26·76	17·87	1·47	150
1900	44·6	26·88	19·84	2·18	174
1899	43·9	28·68	21·14	1·78	189
Average of 10 years 1899-1908.	47·9	25·46	17·51	1·56	151·5

TABLE III.

Shewing the number of Deaths from the Principal Zymotic Diseases for the year 1909, and 10 years preceding.

Year.	Small-pox.	Measles.	Scarlet Fever.	Diph-theria.	Whoop-ing Cough.	Fever.	Diarr-hœa.	Totals.
1909	1	52	6	19	23	9	37	147
1908	...	1	...	15	25	13	60	114
1907	...	23	4	14	9	8	33	91
1906	2	54	10	22	55	6	82	231
1905	...	11	31	16	8	9	79	154
1904	...	80	36	14	28	18	106	282
1903	...	5	14	14	27	13	43	116
1902	1	47	11	10	26	8	87	190
1901	1	12	...	13	33	21	79	159
1900	...	96	...	12	11	22	90	231
1899	...	10	3	20	53	10	89	185
Totals of 10 years 1899-1908.	4	339	109	150	275	128	748	1753

TABLE IV.

Shewing the Relative Mortality Rates from the Principal Zymotic Diseases for the year 1909, and 10 years preceding.

Year.	Small-pox.	Measles.	Scarlet Fever.	Diph-theria.	Whoop-ing Cough.	Fever.	Diarrhœa	Total Zymotic Rate.
1909	0·008	0·42	0·05	0·15	0·18	0·07	0·30	1·18
1908	...	0·008	...	0.12	0·20	0·11	0·49	0·93
1907	...	0·19	0·03	0·12	0·07	0·07	0·27	0·75
1906	0·016	0·46	0·08	0·18	0·47	0·05	0·69	1·95
1905	...	0·09	0·27	0·13	0·07	0·08	0·68	1·33
1904	...	0·70	0·31	0·12	0·24	0·16	0·93	2·47
1903	...	0·04	0·13	0·13	0·24	0·12	0·38	1·04
1902	0·009	0·43	0·10	0·09	0·23	0·07	0·79	1·72
1901	0·009	0·11	...	0·12	0·31	0·19	0·73	1·47
1900	...	0·91	...	0·11	0·10	0·21	0·85	2·18
1899	...	0·10	0·03	0·19	0·51	0·10	0·86	1·78
Average of 10 years 1899-1908.	0·003	0·31	0·09	0·13	0.24	0·11	0·66	1·56

WARD.	1909 Death Rate.	1909 Zymotic Rate.	1908 Death Rate.	1908 Zymotic Rate.
St. Peter's ...	18.05	1.66	15.32	0.95
Millbay ...	16.66	1.09	19.46	1.55
Hoe ...	9.55	0.11	10.48	0.58
St. Andrew's ...	12.47	0.90	11.79	0.68
Vintry ...	15.68	1.84	15.38	1.23
Frankfort ...	16.86	1.38	15.24	0.92
Drake's ...	15.67	0.91	14.00	0.60
Charles ...	14.00	0.55	13.30	0.97
Greenbank ...	9.73	0.67	13.87	0.67
Mutley ...	14.36	1.26	12.81	0.42
Compton ...	19.20	1.03	20.85	0.41
Laira ...	15.19	1.37	17.09	0.95
Friary ...	13.35	1.46	13.25	1.67
Sutton ...	11.65	1.10	12.39	0.55

MORTALITY FROM ZYMOTIC DISEASES.—In the past year there were referred in the aggregate 147 deaths of persons from these diseases, being in the proportion of 1.18 per thousand of the estimated population.

52 were attributed to Measles.
37 ,, ,, Diarrhœa.
23 ,, ,, Whooping Cough.
19 ,, ,, Diphtheria.
9 ,, ,, Enteric Fever.
6 ,, ,, Scarlet Fever.
1 ,, ,, Small Pox.

Although the zymotic death-rate is slightly in excess of last year, it will be seen that the number of deaths from these causes will bear comparison with previous years. The higher rate is accounted for by the prevalence of measles, from which complaint fifty-two deaths occurred, as against only one in 1908.

INFANTILE MORTALITY.—By the infantile mortality is meant the number of deaths of infants under one year of age. It is usually estimated by comparing this number with the number of births and calculating the number of deaths under one year per thousand births. There were 361 deaths under one year of age, or 128.28 per thousand births.

The infant mortality is generally considered one of the most important indications of the sanitary conditions of a town, and it is most satisfactory to note the steady decrease in the deaths of children under one year of age.

From Table V. (Appendix) it will be seen that the greatest proportion of deaths amongst infants occur in the first few months of life. In fact, in the first month 36 per cent., or over one-third of the deaths occur; this includes all those prematurely born, and those whose hold of life is from the first exceedingly feeble; 62 per cent. of the deaths occur in the first three months of life, and 78 per cent., or over three-fourths, in the first six months.

572 deaths of children under five years of age occurred, that is, 30.7 per cent. of the total deaths were those of children under five years of age, and 19.4 per cent. under one year; the average for the last ten years being 32.2 and 22.2 per cent. respectively.

The following table shows the variation of infantile mortality in each quarter of the year:—

	No. of Births.	No. of Infant Deaths.	Infant Mortality Rate per 1000 Births.
First Quarter	749	111	148.2
Second ,, ...	683	72	105.4
Third ,, ...	696	97	139.3
Fourth ,, ...	686	81	118.0
Year ...	2814	361	128.2

CERTIFICATION OF CAUSES OF DEATH.—Of the 1861 deaths registered in the Borough last year, the causes of 1715, or 92.15 per cent., were certified by registered medical practitioners, whilst the causes of the remaining 146, or 7.85 per cent., were certified by Coroner after inquest. No uncertified deaths were registered.

In the year under review 146 deaths were referred to the Coroner and inquests were held with the following verdicts:—

From Natural Causes		93
From Accidental Causes:—		
Burn, scald	10	
Poisoning	1	
Suffocation	12	
Other forms	16	
	—	39
From Suicide and Homicide:—		
Drowning	1	
Hanging	1	
Poisoning	1	
Gunshot wounds	1	
Other methods	3	
	—	7
Open Verdicts:—		
Drowning	4	
Injuries	3	
	—	7
Total ...		146

MORTALITY TABLES—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.		Total
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
All Causes	1861	202	159	99	112	29	29	29	39	60	48	66	56	81	79	110	108	129	133	111	182	1861
I.—Specific Febrile or Zymotic Diseases ..	191	41	35	33	36	4	5	2	5	8	3	2	3	2	2	2	1	..	1	..	6	191
II.—Parasitic Diseases ..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
III.—Dietetic Diseases ..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	2
IV.—Constitutional Diseases	331	7	4	12	17	9	10	16	20	18	17	19	17	25	33	30	25	19	18	4	11	331
V.—Developmental Diseases	198	30	26	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	25	38	73	198
VI.—Local Diseases	1050	97	77	51	55	13	12	8	14	29	26	40	36	49	41	77	82	100	85	69	89	1050
VII.—Violence	51	8	3	2	3	3	2	3	..	4	2	4	..	4	2	1	..	4	3	..	3	51
VIII.—Ill-Defined and not Specified Causes	37	18	14	1	1	..	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	37

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.		Total
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
I.																						
1.—Miasmatic Diseases	126	9	16	32	36	4	5	2	3	5	1	2	1	..	1	1	1	..	1	..	6	126
2.—Diarrhœal ,, ...	37	23	13	1	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	37
3.—Malarial ,, ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4.—Zoogenous ,, ...	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..
5.—Venereal ,, ...	18	8	6	..	.	..	..	..	..	1	..	..	2	1	..	..	..	..	..	..	..	18
6.—Septic ,, ...	10	1	..	.	..	..	..	..	2	2	2	..	..	1	1	1	..	..	..	..	..	10
II.																						
Parasitic Diseases	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
III.																						
Dietetic Diseases	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	2
IV.																						
Constitutional Diseases	331	7	4	12	17	9	10	16	20	18	17	19	17	25	33	30	25	19	18	4	11	331
V.																						
Developmental Diseases	198	30	26	..	.	..	..	..	..	..	..	..	..	..	..	..	..	6	25	38	73	198

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909.

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.		Total
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
VI.																						
1—Diseases of Nervous System ..	217	13	17	10	5	3	4	1	2	8	8	11	6	13	9	12	20	19	28	12	16	217
2— ,, Organs of Special Sense	4	..	1	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	4
3— ,, Circulatory System ..	224	3	2	1	3	1	2	5	4	7	4	12	11	14	14	22	22	41	18	16	22	224
4— ,, Respiratory ,, ..	372	33	31	33	43	4	4	1	2	7	3	14	4	10	8	23	29	22	28	30	43	372
5— ,, Digestive ,, ..	149	45	24	5	4	3	2	1	1	4	3	1	6	8	7	8	5	5	5	5	7	149
6— ,, Lymphatic System and Ductless Glands ..	7	1	..	..	..	..	..	..	2	..	1	..	..	..	..	2	1	..	..	..	..	7
7— ,, Urinary System ..	54	..	..	..	..	1	..	..	2	2	..	1	4	3	2	10	4	13	5	6	1	54
8— ,, Reproductive System—																						
(*a*) Organs of Generation ..	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	2
(*b*) Parturition ..	11	..	..	..	..	..	..	..	1	..	7	..	3	..	..	..	..	..	..	..	..	11
9— ,, Organs of Locomotion	4	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	4
10— ,, Integumentary System	6	2	2	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	6
VII.																						
1—Accident or Negligence ..	44	8	3	2	2	3	2	3	..	1	2	3	..	4	2	1	..	3	2	..	3	44
2—Homicide	2	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2
3—Suicide	5	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	1	1	..	..	5
4—Execution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VIII.																						
Ill-defined and not Specified Causes ..	37	18	14	1	1	..	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	37

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909.

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards		TOTAL
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
MIASMATIC DISEASES.																						
Small Pox	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Chicken Pox	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Measles	52	6	9	18	18	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52
Epidemic Rose Rash	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	6	..	..	2	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	15	..	..	..	..	..	1	..	1	2	..	1	..	..	1	1	1	..	1	..	6	15
Whooping Cough	23	2	7	6	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	23
Membranous Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	19	..	..	6	9	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19
Cerebro-spinal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Simple and Ill-defined Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhoid or Enteric Fever	9	..	..	..	..	..	..	2	2	3	1	..	1	..	..	..	..	..	..	..	..	9
Other Miasmatic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DIARRHŒAL DISEASES.																						
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhœa, Dysentery	37	23	13	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	37
MALARIAL DISEASES.																						
Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

MORTALITY TABLES—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.		TOTAL
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
ZOOGENOUS DISEASES.																						
Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Glanders	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Splenic Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cow-pox & other effects of Vaccination	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VENEREAL DISEASES.																						
Syphilis	18	8	6	..	..	..	..	..	..	1	..	..	2	1	..	..	..	..	..	..	..	18
Gonorrhœa, Stricture of Urethra	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SEPTIC DISEASES.																						
Phagedæna	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	4	..	..	..	..	..	..	..	1	2	1	..	..	..	..	..	..	..	..	..	..	4
Pyæmia, Septicæmia	6	1	..	..	..	..	..	..	1	..	1	..	..	1	1	1	..	..	..	..	..	6
Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
PARASITIC DISEASES.																						
Thrush	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Other Dis. from Vegetable Parasites	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydatid Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases from Animal Parasites	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DIETETIC DISEASES.																						
Starvation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scurvy	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..
Intemperance — Chronic Alcoholism	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	2
Intemperance — Delirium Tremens	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.		TOTAL
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
CONSTITUTIONAL DISEASES.																						
Rheumatic Fever	3	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Rheumatism	4	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	1	4
Gout	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Rickets	12	2	1	3	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12
Cancer	125	..	..	1	..	1	..	1	..	1	2	4	8	7	23	17	19	15	12	4	10	125
Tabes Mesenterica	3	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Tubercular Meningitis (Acute Hydrocephalus)	18	..	1	3	7	1	2	..	2	..	1	1	..	..	..	..	..	..	..	..	..	18
Phthisis	125	..	1	..	..	5	3	13	14	17	12	13	8	15	7	10	3	2	2	..	..	125
Other Forms of Tuberculosis, Scrotula	18	4	1	4	2	..	2	..	2	..	1	..	..	1	..	1	..	..	..	..	..	18
Purpura, Hæmorrhagic Diathesis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Anæmia, Chlorosis, Leucocythæmia	13	..	..	..	..	1	3	..	2	..	1	..	1	2	1	..	..	1	1	..	..	13
Diabetes	9	..	..	..	..	..	..	1	..	..	..	..	..	..	2	1	1	1	3	..	..	9
Other and undefined Constitutional Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DEVELOPMENTAL DISEASES.																						
Premature Births	50	27	23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	50
Cyanosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Spina Bifida	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Congenital Defects	6	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
Old Age	142	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	25	38	73	142

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909.

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.		TOTAL
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
DISEASES OF NERVOUS SYSTEM.																						
Inflammation of Brain or its Membranes	18	1	1	5	3	2	3	1	..	..	1	..	..	..	..	..	1	..	..	..	..	18
Apoplexy	18	..	..	..	..	..	..	..	..	2	1	..	..	1	..	1	5	2	6	..	..	18
Softening of the Brain	3	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	3
Hemiplegia, Brain Paralysis ..	7	..	..	..	..	..	..	..	..	..	..	..	..	2	..		..	..	3	..	2	7
Paralysis Agitans	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	4
Insanity, General Paralysis of Insane	16	..	..	..	..	..	..	..	..	1	1	5	1	1	2	..	..	4	..	1	..	16
Chorea	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
Epilepsy	13	..	..	..	1	..	1	..	..	..	2	2	..	3	1	..	..	..	2	1	..	13
Convulsions	32	11	16	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	32
Laryngismus Stridulus	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Idiopathic Tetanus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Paraplegia, Diseases of Spinal Cord	14	..	..	..	..	..	..	..	..	2	..	..	3	..	1	2	3	3	..	..	..	14
Other and undefined Diseases of Brain or Nervous System ..	90	1	..	..	1	..	..	..	1	3	3	4	2	5	5	7	9	10	16	19	4	90
DISEASES OF ORGANS OF SPECIAL SENSE.																						
Otitis, Otorrhœa	3	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	3
Epistaxis and Diseases of Nose ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ophthalmia and Diseases of Nose ..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1908.

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards		TOTAL
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
DISEASES OF CIRCULATORY SYSTEM.																						
Endocarditis, Valvular Disease ..	77	..	..	..	..	1	2	2	3	4	2	3	4	7	8	7	7	12	6	2	7	77
Pericarditis	2	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2
Hypertrophy of Heart	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	..
Angina Pectoris	5	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	..	..	1	5
Syncope	16	2	2	..	2	..	..	..	..	..	..	..	1	..	..	..	..	5	..	2	2	16
Aneurism	4	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	1	..	..	..	..	4
Senile Gangrene	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2
Embolism, Thrombosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other and undefined Diseases of Heart or Circulatory System ..	118	1	..	..	1	..	..	3	1	3	2	8	4	6	4	15	14	21	12	11	12	118
DISEASES OF RESPIRATORY SYSTEM.																						
Laryngitis	7	1	..	2	1	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	7
Croup	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Other Diseases of Larynx and Trachea	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Emphysema, Asthma	9	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	3	2	..	1	..	9
Bronchitis	197	21	17	10	19	2	..	..	..	1	..	5	1	4	3	13	15	13	17	18	38	197
Pneumonia	133	11	12	18	22	1	3	1	2	4	1	7	1	4	3	7	10	5	10	6	5	133
Pleurisy	12	..	..	..	..	..	..	..	..	..	1	1	..	1	2	2	1	1	1	2	..	12
Other and undefined Diseases of Respiratory System	12	..	2	..	1	..	..	..	..	..	..	1	1	1	..	..	..	1	..	3	..	12

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.		Total.
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
DISEASES OF DIGESTIVE SYSTEM.																						
Stomatitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dentition	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Dyspepsia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hæmatemesis	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Diseases of Stomach	30	4	2	1	3	2	..	..	1	1	..	..	3	3	1	3	1	1	1	3	..	30
Enteritis	21	11	7	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	21
Ulceration of Intestine	3	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	3
Ileus, Obstruction of Intestine	8	1	..	1	..	1	..	..	..	..	..	..	..	..	..	1	1	..	2	1	..	8
Stricture, or Strangulation of Intestine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Intussusception of Intestine	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Hernia	5	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	2	5
Fistula	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Peritonitis	5	..	..	..	..	..	1	1	..	..	..	1	..	..	2	..	..	..	..	..	..	5
Ascites	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gallstones	3	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	3
Cirrhosis of Liver	10	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3	..	2	1	..	1	10
Other Diseases of Liver	10	2	3	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	..	2	10
Other and undefined Diseases of Digestive System	50	26	12	1	1	..	1	..	..	1	1	..	..	3	1	..	1	1	..	1	..	50

MORTALITY TABLES—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.		TOTAL
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Diseases of Lymphatic System and Ductless Glands.																						
Diseases of Lymphatic System ..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2
Diseases of Spleen	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bronchocele	3	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	..	3
Addison's Disease	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2
Diseases of Urinary System.																						
Acute Nephritis	22	..	..	..	..	..	..	..	1	1	..	..	2	..	2	5	2	5	2	2	..	22
Bright's Disease	9	..	..	..	..	1	..	..	1	..	..	..	..	1	..	1	2	1	1	..	1	9
Uræmia	6	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	2	1	..	..	6
Suppression of Urine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Calculus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hæmaturia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diseases of Bladder and of Prostate..	13	..	..	..	..	..	..	..	..	1	..	..	..	..	..	3	..	5	..	4	..	13
Other and undefined Diseases of Urinary System	4	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	1	..	..	4
Diseases of Organs of Generation.																						
Ovarian Disease	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	2
Diseases of Uterus and Vagina ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Disorders of Menstruation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pelvic Abscess	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Perineal Abscess	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diseases of Testis, Penis, Scrotum, etc.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909.

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.		Total
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
DISEASES OF PARTURITION.																						
Abortion. Miscarriage	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Puerperal Mania	3	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	3
Puerperal Convulsions	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Placenta Prævia, Flooding ..	2	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2
Phlegmasia Dolens	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other and undefined Accidents of Childbirth	4	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	4
DISEASES OF ORGANS OF LOCOMOTION.																						
Caries, Necrosis	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	2
Arthritis, Ostitis Periostitis ..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..
Other and undefined Diseases of Organs of Locomotion	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2
DISEASES OF INTEGUMENTARY SYSTEM.																						
Carbuncle	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Phegmon, Cellulitis	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Lupus	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
Ulcer, Bedsore	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Eczema	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pemphigus	3	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Other and undefined Diseases of Integumentary System	1	..	1	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	..	1

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909.

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards		TOTAL
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Ill-defined and not Specified Causes.																						
Debility, Atrophy, Inanition ..	31	18	12	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	31
Other Ill-defined and not specified Causes	6	..	2	1	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	6
(INQUESTS)																						
Accident or Negligence.																						
Fractures, Contusions	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gunshot Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cut, Stab	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Burn, Scald	10	1	..	2	2	1	1	..	..	..	..	..	..	..	1	..	..	..	1	..	1	10
Poison	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Drowning	4	..	..	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..	1	..	..	4
Suffocation	12	7	2	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	12
Other and undefined Forms ..	17	..	1	..	..	2	1	1	..	1	..	2	..	3	1	1	..	2	..	..	2	17
HOMICIDE.																						
Murder, Manslaughter	2	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1909.

CAUSES OF DEATH.	All Ages.	Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards		Total
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
INQUESTS.—*continued.*																						
Suicides.																						
Gunshot Wounds	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Cut, Stab	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poison	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
Drowning	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Hanging	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
Other and undefined Methods ..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
NATURAL CAUSES.																						
Specific Febrile or Zymotic Diseases	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Constitutional Diseases	3	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	3
Diseases of Nervous System ..	11	3	3	..	1	..	..	..	..	2	1	..	..	1	..	..	..	..	..	..	..	11
,, Circulatory System ..	41	3	2	..	2	..	..	..	..	1	..	3	3	3	1	3	2	10	2	4	2	41
,, Respiratory System ..	17	1	5	3	3	..	..	..	..	1	..	..	..	..	..	..	..	..	..	3	1	17
,, Digestive System ..	6	1	2	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..	6
,, Urinary System ..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Other Causes	15	3	7	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	2	1	..	15

PREVALENCE OF DISEASE.

The following table gives the number of cases of infectious diseases reported by the medical practitioners of the town during the year, compared with the previous year, and also the number of deaths resulting therefrom:—

Disease.	Deaths.		Cases Notified.		Case Fatality per cent.
	1909.	1908.	1909.	1908.	
Small Pox ...	1	0	0	0	—
Scarlet Fever ...	6	0	174	87	3·45
Diphtheria ...	19	15	137	100	13·94
Typhoid Fever ...	9	13	29	69	31·03
Measles ...	52	1	—	—	—
Whooping Cough	23	25	—	—	—
Diarrhœa ...	37	60	—	—	—
	147	114	340	256	

SMALL POX.—No cases of Small Pox have been notified during the year. Three cases, however, have been treated on board the Hospital Ship '*Maud*.'

The first case admitted in March last was a resident of East Stonehouse; the next case was a passenger on the Norddeutscher Lloyd S.S. *Kronprinzessin Cecilie*, which arrived here on June 2nd from Tampico; and the other case was a missionary returned from Africa by the S.S. *Mendi*, who developed the disease in the early days of the voyage. The first mentioned cases were discharged cured, but the latter terminated fatally after two days' treatment. This patient was unvaccinated, having refused to submit to the operation.

SCARLET FEVER.—The notified cases of this disease numbered 174 show an increase on the notifications of 1908. The majority of cases (57.5 per cent.) were at once removed to the hospital; only 74 were nursed at home.

The distribution of these cases throughout the year is shewn by the tables appended. It will be seen that there was a sudden increase in July, and again in September, and that this latter rise continued to the end of December. The disease was more prevalent in Compton and Laira Wards, where 39 and 21 cases respectively occurred.

DIPHTHERIA.—The reported cases of Diphtheria for the past year were 137, with 19 deaths, as against 15 in 1908. This has been the most serious matter we have had to deal with during the twelve months, and my attention has been closely given to the matter. As soon as notified, every case has been immediately visited and all the surroundings minutely inquired into, such as drainage, milk supply, or any likely cause of infection.

Ninety cases (including eight from outside districts) were admitted during the year to hospital, nine of whom died, giving a hospital mortality of 9.1 per cent., as against 20 per cent. for those nursed at home.

The extent and annual fatality from Diphtheria in Plymouth during the five years 1905-6-7-8-9 is as follows:—

	Cases Treated in Hospital.						Cases Nursed at Home.		
Year	Total cases admitted.	No. of Deaths.	Mortality per cent.	Cost (per patient) Antitoxin. £	s.	d.	Total cases.	No. of Deaths	Mortality per cent.
1905.	53	6	11.3	0	14	3	78	9	11.5
1906.	52	11	21.1	0	18	7	88	11	12.5
1907.	40	3	7.5	2	3	0	65	11	16.9
1908.	47	6	12.7	1	12	7	53	9	17.0
1909.	90	9	9.1	1	2	6	55	11	20.0

In May last your Authority made an arrangement with the Committee of the South Devon and East Cornwall Hospital, whereby, on payment of the sum of five guineas per annum, they would undertake bacteriological examinations for the Corporation at the scale of fees fixed by the Clinical Research Association of London, viz., sputum, 3s. 6d. per examination; diphtheria, 5s. per examination; blood (typhoid), 4s. per examination.

Apart from its undoubted value to medical men, the results of these examinations should reduce the fatality of diphtheria and also effect a saving in the cost of treatment of the disease.

ENTERIC OR TYPHOID FEVER.—During the past year 29 cases of Enteric Fever were reported, of which 23, or 79.3 per cent. were removed to hospital, with a mortality of five, equal to 21.7 per cent. Of the six cases treated at home, four died, equal to a mortality of 66.6 per cent. The difference in favour of hospital lies in the fact that the diet is strictly regulated there, many deaths arising at home from injudicious feeding.

MEASLES.—This disease became prevalent early in January and occasioned 52 deaths, compared with one in the preceding year. The whole of these deaths took place in the first five months of the year, viz., 4 in January, 11 in February, 22 in March, 14 in April, and one in May. The deaths occurred in each of the fourteen wards of the Borough, St. Peter's, Vintry, and Friary suffering most, and Hoe and Charles the least.

WHOOPING COUGH.—From this disease twenty-three deaths were registered, all of which were of children under two years. It will be observed that from the two diseases, Measles and Whooping Cough combined seventy-five deaths occurred, comparing unfavourably with a total of thirty-five deaths from all the notifiable zymotic diseases, an unanswerable argument in favour of the compulsory notification of all infectious diseases.

DIARRHŒA.—There were thirty-seven deaths from Diarrhœa in 1909, compared with sixty in the previous year. This means that there was a death-rate of 0.30 per thousand of the population due to this disease; also it is the lowest rate recorded in the Borough, with one exception.

Of the thirty-seven deaths attributed to Diarrhœa, only one was of a child aged one year and under five, the remaining thirty-six were those of infants less than twelve months old.

As is invariably the case, the disease commenced to be prevalent and fatal in the late summer and autumn, as many as thirty out of thirty-seven fatal cases occurring in the two months of August and September.

BOROUGH HOSPITAL.

At your Isolation Hospital 259 patients have been under treatment during the year; the number in the previous year was 174. Of this number 32 were remaining in the Hospital at the beginning of the year.

The death-rate for patients treated in hospital is 6.18 per cent., as compared with 8.62 per cent. in the previous year.

The mortality rate for patients treated at home is 9.63 per cent., as compared with 10.63 per cent. in 1908.

The average daily number of patients in hospital was 18.25, as compared with 19.16, the figure of the previous year.

The total number of days spent by patients in hospital was 6663, giving an average of 41.9 days per patient.

The cost of maintaining the Hospital was £3320 11s., of which £336 15s. 9d. was repaid, as shewn in the following statement of accounts for the year ending March, 1909.

The average cost per patient was £20 7s. 8d., or taking the stay in Hospital at 5 2/7 weeks £2 6s. 9d. per week.

	1907-8. £ s. d.	1908-9. £ s. d.
Salaries and Wages	991 17 6	939 19 6
Medical and Surgical Expenses ...	213 16 1	214 10 7
Provisions	1025 14 7	999 13 4
Domestic Expenses	791 10 11	665 10 6
Repairs, Painting, etc.	382 5 10	234 13 9
Miscellaneous Expenses	240 7 8	266 3 4
	£3645 12 7	3320 11 0
Persons treated	153	159
Average daily occupied beds ...	19.16	18.25
	£ s. d	£ s. d.
Cost of each occupied bed ...	190 5 5	181 18 11
Average cost of food per head per week (including staff) ...	0 8 4	0 8 5
Amount received from Patients ...	279 7 3	336 15 9

PLYMOUTH SANITARY AUTHORITY'S HOSPITALS.

Table of Cases Treated during 1909.

MOUNT GOULD HOSPITAL.

	Scarlatina.		Diphtheria.		Membranous Croup.		Typhoid Fever.		Erysipelas.		Continued Fever.		Puerperal Fever.		Chicken Pox.		'Observation.'		Totals.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Remaining from last Year ..	6	4	4	5	..	..	6	7	..	..	..	..	..	..	..	..	..	..	32
Admitted	53	58	34	56	..	..	11	11	..	2	..	..	..	..	..	..	1	1	227
Discharged	45	48	30	48	..	..	11	15	..	2	..	..	..	..	..	..	..	..	199
Died	3	1	4	5	..	..	2	1	..	..	..	..	..	..	..	..	..	..	16
Remaining in Hospital	11	13	4	8	..	..	4	2	..	..	..	..	..	..	..	..	1	1	44

PLYMOUTH SANITARY AUTHORITY'S HOSPITALS.

Table shewing the number of Cases admitted in each month during 1909.

MOUNT GOULD HOSPITAL.

Month.	Scarlet Fever		Diphtheria		Typhoid Fever.		Membranous Croup.		Continued Fever.		Erysipelas		"Observation."		Aggregate No. of days spent in Hospital.	Average No. of days for each Patient.
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.		
January	7	..	6	1	3	1	..	..	..	..	1	..	..	..	906	18·5
February	5	..	7	1	4	..	..	..	..	..	..	..	..	..	629	14·3
March	7	..	4	..	2	1	..	..	..	..	..	..	..	..	783	20·0
April	2	1	4	1	2	1	..	..	..	..	..	..	..	..	627	20·9
May	7	1	8	2	1	..	..	..	..	..	..	..	..	..	418	14·4
June	7	..	7	..	..	..	..	..	..	..	..	..	..	..	451	16·1
July	10	..	11	..	1	..	..	..	..	..	..	..	..	..	580	13·8
August	3	..	2	2	..	..	..	..	..	..	..	..	..	..	462	17·7
September ..	16	2	10	..	3	..	..	..	..	..	..	..	..	..	572	14·3
October	16	..	11	1	..	..	..	..	..	..	..	..	..	..	971	17·3
November ..	13	..	9	..	2	..	..	..	..	..	1	..	..	..	1065	16·9
December ..	18	..	11	1	4	..	..	..	..	..	..	..	2	..	1120	16·4
Year	111	4	90	9	22	3	..	..	..	..	2	..	2	..	8584	33·1

THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

Table shewing the number of cases of Infectious Disease notified in each month during the year 1909.

NOTIFIABLE DISEASES.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTALS.
Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlatina or Scarlet Fever	9	6	5	6	6	9	18	5	22	21	32	35	174
Diphtheria	16	8	10	9	13	9	14	7	15	14	13	9	137
Membranous Croup	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhoid or Enteric Fever	3	4	3	2	1	..	2	1	4	1	3	5	29
Continued Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	1	..	1	1	..	..	..	..	..	..	1	..	4
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	5	7	7	6	5	8	8	8	15	26	30	21	146
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..
Total in each month	34	25	26	24	25	26	42	21	56	62	79	70	490

THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

Table shewing the number of Notifications received in the year 1909, and in the ten years preceding.

Notifiable Diseases.	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Small Pox	..	..	1	3	..	..	101	172	2	..	..
Scarlatina or Scarlet Fever ..	255	66	51	205	369	690	657	469	197	87	174
Diphtheria	47	58	39	54	60	61	131	140	105	99	137
Membranous Croup	6	5	7	7	4	7	1	1	2	1	..
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..
Typhoid or Enteric Fever ..	50	127	64	38	75	77	54	26	48	68	29
Continued Fever	1	2	18	4	..	..	..	..	1	1	..
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	15	9	9	13	7	7	3	9	5	8	4
Cholera	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	200	140	132	175	152	141	158	223	146	110	146
Measles	..	94	186	981	151	1413	248	808	405	..	..
Whooping Cough	..	22	294	260	303	233	153	462	110	..	..
Totals	574	523	801	1740	1121	2629	1506	2310	1021	374	490

Monthly Table of Deaths from All Causes and Zymotic Diseases, with the rates per 1,000, per annum.

MONTH.	No. of Deaths from All Causes.	Annual Rate per 1000 living.	No. of Deaths from Zymotic Diseases.	Annual Rate per 1000 living.	Deaths of	
					Infants under 1 year of age	Persons aged 60 & upwards.
January	169	16·33	9	0·87	32	63
February	177	17·10	13	1·25	33	68
March	223	21·55	24	2·32	46	88
April	193	18·65	16	1·54	29	61
May	147	14·20	7	0·67	21	57
June	116	11·21	4	0·38	22	45
July	96	9·27	4	0·38	16	36
August	132	12·75	28	2·70	47	36
September	134	12·96	17	1·64	34	43
October	128	12·37	5	0·48	28	50
November	160	15·46	9	0·87	23	72
December	186	17·98	11	1·06	30	72
YEAR	1861	14·98	147	1·18	361	691

Report of Borough Analyst.

Borough Laboratory,

Municipal Buildings,

Plymouth.

January, 1910.

Gentlemen,

During 1909, as in the preceding year, 242 articles of food were examined in the Borough Laboratory in accordance with the provisions of the Food and Drugs Act, twenty-seven of these being informally taken for the purpose of preliminary examination, the vendors receiving no notice that the articles were to be analysed.

The number found adulterated was considerably less than usual, amounting to eleven only, or 4.5 per cent. This interesting figure is probably due to the fact that milk constituted half the samples examined, and that early in the year salutary fines were inflicted in two instances, so that no further case of adulterated milk was met with during the following five months.

The nature of the samples examined and results are set forth in the sub-joined tables:—

Articles analysed	Genuine.	Adulterated.	Total.
Raw Milk	103	7	110
Scald Milk	1	2	3
Condensed Milk	9	...	9
Block Jelly	3	...	3
Butter	26	...	26
Cheese	11	...	11
Cayenne Pepper	6	...	6
Coffee	11	...	11
Cream	2	...	2
Demerara Sugar	5	...	5
Gin	4	1	5
Ground Ginger	2	...	2
Ground Almonds	4	...	3
Honey	3	...	3
Lard	6	...	6
Margarine	3	...	3
Marmalade	4	...	4
Pepper	7	...	7
Sausages	4	1	5
Vinegar	3	...	3
Whisky	15	...	15
	231	11	242

Milk. A large proportion of the samples examined gave figures approximating the Local Government Board Standard, variations of composition, particularly with regard to the amount of fat not now being so frequently found as formerly.

This is explained by the fact that the milk is largely submitted to a procedure known as "toning" in practice with some dairymen, whereby genuine milk is thinned out by admixture with machine-separated milk from which nearly all the fat has been abstracted. By this manœuvre a mixture is sold as "genuine raw," containing half or more of machine-skimmed milk. This must be a very profitable side of the dairyman's calling, for separated milk is brought into Plymouth

in large quantities, and there can be no doubt that thousands of gallons costing 4d. per gallon are annually retailed as genuine milk at 1s. 4d. per gallon.

The adulteration found consisted of adding from 2 to 14 per cent. of water, and in other cases abstracting from 3 to 33 per cent. of the milk fat.

Scald Milk. Two of the three samples submitted were found to be grossly adulterated by the addition of 30 and 42 per cent. of water. Convictions were obtained and the vendors were fined £10 10s. and £15 and costs respectively.

Condensed Milk. Nine informal samples were examined and a special report made of the results to the Sanitary Committee. Six of the samples were prepared from machine-skimmed milk, so that the milk fat disappeared almost to the vanishing point when the concentrated product was diluted with the usual amount of water.

Sausages. Three out of five informal samples contained boric acid as a preservative—in one case as much as 20 grains to the pound.

Gin. One of the five samples was 40.6 degrees under proof. The vendor was cautioned by the Town Clerk.

All the other articles were found to be genuine and require no further comment.

I am, Gentlemen,

Yours obediently,

CHAS. E. BEAN,

F.I.C., F.R.C.S.E., F.R.S. Med.

Annual Report of the Port Medical Officer for the year 1909.

PLYMOUTH PORT SANITARY AUTHORITY.

GENTLEMEN,

I have the honour of presenting my nineteenth Annual Report on the health of the floating population and the work of your officials during the past year.

During the above-mentioned period ninety vessels have been inspected by me on arrival of the ships in the Sound, Docks, etc. One hundred and sixty-nine vessels of 787,976 tons registered, carrying 35,283 crew, and 37,439 passengers arrived during the year from plague and cholera-infected ports, etc., reporting sickness or deaths as having occurred during the voyage or on arrival at this Port.

The number of passengers landing from the above-mentioned vessels was 7,250. 554 cases of sickness and 51 deaths were also investigated by your officials, of which 247 cases were those of an infectious character.

Your Inspector has visited 3468 vessels, in 238 of which notices were served to remedy 703 defects.

Of the foregoing vessels visited 1098 were steamers and 1173 sailing vessels from coastwise. 772 steamers and 238 sailing yessels from foreign ports and 187 fishing boats.

Of the 3468 vessels inspected, 3054 were British, 130 German, 93 French, 46 United States, 39 Dutch, 35 Norwegian, 23 Russian, 17 Danish, and the remaining 31 of various nationalities.

During the year 82 notices have been served requiring the cleansing, painting or limewashing of forecastles, 36 sets of bedding and 43 bunks, 87 w.c.'s to be cleansed, repaired, or replaced. Also 41 ventilators to be fitted in forecastle, freed from packing or repaired.

The quantity of unsound food voluntarily surrendered to the Port Inspector as unfit for food during the year consisted of 7 lbs. of fish and 35 tons of potatoes, 31 tons 2 cwt. of which were taken to sea in barges and thrown overboard, 3 tons 18 cwt. removed and utilized as manure.

During the year some 144,685 passengers arrived in the Port, 31,615 of this number landed here.

Of the 554 cases of sickness and 51 deaths investigated during the year, it is to be observed that 33 cases of Pulmonary Tuberculosis were landed at this Port or proceeded in the ship to home ports for treatment, also six deaths occurred during the voyage home.

The Local Government Board having notified me of the existence of Cholera in various ports on the North and East Coast of Europe, special precautions have been taken to prevent the inroad of that disease in this Port.

All vessels arriving from infected ports have been held up in the Sound for inspection, and in all cases I considered it advisable to have all water pumped overboard from ship's tanks prior to vessels proceeding in Docks, in accordance with Article 22 Cholera Regulations, 9th September, 1907.

I am pleased to report the readiness shewn by the Masters of vessels upon whom notices have been served by your Inspector to remedy defects, your officer having little or no

trouble in obtaining compliance with the requirements as set out in the various notices issued from time to time.

On the 30th April last the P. and O. s.s. "Persia" arrived from Bombay--reported having landed a case of suspected Plague at Marseilles. The patient died the following day.

The Local Government Board Regulations, 1907, were strictly adhered to at this Port, and no further developments occurred.

On the 10th May last the Danish Schooner "Jason," from Morlaix arrived at this Port, reporting a case of sickness on board. Upon examination, the case proved to be one of Diphtheria, and the patient was removed to the Borough Hospital. The crew's quarters were thoroughly disinfected, also clothes and effects, and all precautions taken to prevent infection.

On the 2nd June last the Hamburg-American s.s. "Kronprinzessin Cecilie" arrived at this Port from Tampico, reporting a case of chicken pox. Upon examination the case proved to be Small-pox of a confluent type. The patient was at once removed to the Hospital Ship. All clothes and effects were disinfected, and every precaution taken to prevent infection. The patient has since been discharged convalescent.

On the 10th December last the British and African S.N. Co.'s s.s. "Mendi" arrived from the West Coast of Africa and Madeira, reporting sickness on board. Upon examination the case proved to be confluent hæmorrhagic Small-pox, and was immediately removed to the Hospital Ship, where, I regret to say, the patient died two days later. The quarters occupied by the patient on board the "Mendi" were disinfected, and all precautions taken to prevent the spread of infection—bedding, clothing, etc., removed with him to the Hospital Ship being destroyed.

On the 18th December the Norwegian Barque "Bass Rock" arrived from Callao with a cargo of guano, reporting sickness

on board, also one death as having occurred on board on the 13th instant from Beri-Beri. Upon examination I discovered the Master and two of the crew to be suffering from Beri-Beri, and ordered their removal to Hospital. The two seamen were taken to the S.D. and E.C. Hospital, and the Master to the North Friary Nursing Home, where I regret to say he died. Samples of food were taken and forwarded to the Local Government Board for examination.

On the 25th December the Orient Line s.s. "Osterley" arrived from London outward bound to Australia, reporting three cases of Scarlet Fever on board, and they were removed with the mother and another child to the Borough Hospital, where they are making satisfactory progress towards recovery.

The sloop "Flamingo" was turned over to your Authority on the 12th August last and was moored at the Electricity Wharf in Cattewater. Specifications were drawn up and tenders invited, and after due consideration your Committee decided to accept that forwarded by Mr. Hawke, of Stonehouse.

I may say the work necessary for converting the "Flamingo" into a Hospital Ship is near completion.

You will observe in Table IV. that during the past year 3468 vessels were visited by your officials, carrying 113,518 crew and 144,685 passengers. The total registered tonnage of vessels visited during the year being 2,526,906 tons.

During the summer months, in addition to the precautions against the inroad of Cholera, special attention had to be directed to all vessels from plague-infected ports, this disease being prevalent in India, Japan, Brazil, Venezuela, Peru, Chili, Ecuador, but I am pleased to report the number of cases is on the decrease at the present time.

On the 19th April last and the three following days G. C. Hancock, Esq., M.R.C.S., Inspector, Local Government Board, visited the Port in connection with the recent orders relating to the inspection of meat and foods landing at this Port.

Dr. Hancock visited the offices at 19 Whimple Street to interview, in company with myself, S. Edgcumbe, Esq., J.P., C.C. (Chairman), in connection with your staff and their duties; in the afternoon he made a tour of inspection, visiting all wharves, jetties, pontoons, piers, transit sheds, and inspecting facilities for storing and landing goods at the Great Western Docks, and proceeding in the motor launch to Sutton Pool, Fish Quay, Victoria Docks, and all stores and sheds at Cattedown.

On the 20th Dr. Hancock visited the Meat Market and Slaughterhouses in the Borough during the forenoon, in the afternoon proceeding in the motor launch to the Hospital Ship "Pique," Sound, Stonehouse Pool, Richmond Walk, Tamar Canal and New Passage, landing at the latter stage and making a tour of the district.

On the 21st, in company with myself, the Inspector interviewed W. D. Thompson, Esq., Collector of Customs, at the Custom House, also J. Walter Wilson, Esq., Clerk to the Authority, C. E. Bean, Esq., F.R.C.S., Public Analyst, relating to the Food and Drugs Acts.

Dr. Hancock visited the P. and O. s.s. "Moldavia" in the Sound on the 22nd, making himself acquainted with the general routine of the visiting of vessels from plague-infected ports. Before the completion of the inspection, I may say he expressed his appreciation of the manner in which all journals, books, and documents in use by your officers were kept.

The regulations appertaining to the inspection of meat and other foods considerably increased the duties and responsibilities of the Port Sanitary Authority.

I am pleased, however, to report that your Committee appointed Mr. H. R. Smith as Meat and Foods Inspector, he being fully qualified, and holding the certificate of the Royal Sanitary Institute for Meat and Foods Inspection, his appointment dating from May 13th, 1909. He entered upon his

duties on the 12th June. The period to which this report refers is therefore seven months only.

The regulations being new, there were some little difficulties experienced at the outset in carrying out the duties. The law requires the agent or person having custody of the goods to "uncover or unpack" the same when so required for the purpose of examination. Some of the Shipping Agents, however, regarded this as a hardship. Consequently a deputation from the Agents had an interview with your officers, and subsequently with an Inspector from the Local Government Board. Since then there has been no further obstruction, and the work is going on smoothly.

The statement on page 19 indicates the nature of the foods which came under inspection and examination.

In conclusion, let me take this opportunity of expressing my thanks to the various Shipping Agents, Customs, and Dock Officials for their courtesy and assistance during the year.

I have the honour to remain, Gentlemen,
Your obedient Servant,

F. M. WILLIAMS,
Port Medical Officer.

Regulations under the Public Health (Regulations as to Food) Act, 1907.

By the Public Health (Regulations as to Food) Act, 1907, the power of the Local Government Board of making Regulations under the Public Health Act, 1896, was extended to include measures to be taken to prevent danger to the Public Health from the importation, preparation, storage, and distribution of articles of food or drink (other than drugs or water) intended for sale for human consumption.

These Regulations, which came into effect on October 1st, 1908, have been framed with the object of securing that articles of food which are unsound, unwholesome, or unfit for human consumption, and which as part of the cargo of a ship are brought to a place in this country either as a place of destination, or elsewhere in the United Kingdom, shall be dealt with at the port of discharge. This procedure is necessary for the prevention of danger to the public health from the consumption of unsound or unwholesome food.

Powers of inspection for the purposes of the Regulations are conferred upon the Medical Officer of Health or any duly qualified Medical Practitioner appointed or employed by the Sanitary Authority to act in the execution of the Regulations and upon any other person appointed or employed by the Authority under the Regulations to exercise any powers or discharge any duties assigned to the Medical Officer of Health.

Notices or certificates in writing can only be given by the Medical Officer of Health or by an officer acting in the place of or as assistant to the Medical Officer of Health.

The Medical Officer of Health is authorized to examine articles of food which have been landed within the district, and the master of a ship, the importer, or a person having the custody of any lands or premises in use for the storage of any

articles of food, must afford, by a convenient and suitable arrangement, unpacking or uncovering of so much of the cargo, or of any consignment delivered overside or landed or deposited on the lands or premises, as comprises articles of food, all such facilities as the Medical Officer of Health may reasonably require for the examination of the article of food.

The Medical Officer of Health is further empowered to take samples of food stuffs when considered necessary, and also for the temporary detention of consignments pending the completion of the examination of the samples taken.

Any article of food which in the opinion of the Medical Officer of Health or his assistant, is unsound, unwholesome, or unfit for human consumption, may be seized in order that application may be made to a Justice for an order of condemnation.

Regulations under the Public Health (Regulations as to Food) Act, 1907.

(FOREIGN MEAT REGULATIONS.)

These Regulations came into operation on the 1st January, 1909, to be enforced and executed by every Officer of Customs, by every Port Sanitary Authority, and by the Medical Officer of Health, and, where the circumstances so require, by any other officer of a Sanitary Authority.

The meats are classed in these Regulations under three headings, viz., Class I., Class II., and Class III.

Class I. comprises and deals with foreign boneless meat which is imported and is described as follows:—

"Scrap meat, namely, meat which, whether it is fresh, or has, before importation, been subjected to a process of freezing or other refrigeration, or to chemical or other treatment, with or without the addition of any preservative or colouring substance, consists of scraps, trimmings, or other pieces of such shape or in such condition as to afford insufficient means of identification with definite parts of a carcass; has not, before importation, been made ready for human consumption in the form of a sausage or of another prepared or manufactured article of food, and is with or without bone in its natural state of attachment."

It also deals with imported tripe, tongues, or kidneys to which certain chemical preservatives have been applied. Also consignments of pork in portions less than the whole carcass, unless they are accompanied by an "official certificate" as evidence that the pig from which the meat is derived has been certified by a competent Authority in the place of origin to be free from disease at the time of slaughter.

Class II. means foreign meat, which, being in the form of the entire carcass of a pig, has not, before importation, been salted, cured, pickled, dried, or smoked, or otherwise prepared as bacon or ham, and is without the head in its natural state of attachment to the carcass, and is without the lymphatic glands about the throat and any other part of the carcass in their natural position.

Class III. means foreign meat which is in the form of severed parts of the carcass of a pig, or of other edible parts of a pig, which has not before importation been salted, cured, pickled, dried, or smoked, or otherwise prepared as bacon or ham, which is not and does not comprise any foreign meat of Class I. and which is contained in a box, case, receptacle, or package with an official certificate impressed thereon or affixed or attached thereto.

Any foreign meats imported other than those mentioned are termed foreign meat unclassed.

Provision is also made for the detention of vessels arriving with consignments of foreign meat that the same shall not be removed from the vessel until the meat has been examined by the Medical Officer of Health, or from the place of delivery, or of landing, or from any other place which the Officer of Customs specifies. The Officer of Customs informing the Medical Officer of Health to the effect of his notice.

Instructions are also provided for the detention and dealing with foreign meat which is diseased, unsound, unwholesome, or unfit for human consumption, by the Public Health Authorities at the place of importation.

The powers of inspection, condemnation and penalties for contravening the Act are similar to those contained in the Unsound Food Regulations.

TABLE I.—PLYMOUTH PORT SANITARY AUTHORITY.

Shewing the Number of Vessels Inspected during the year 1909.

Place of Visit.	Total Vessels for the Year.		For Quarter Ending.							
			March.		June.		September.		December.	
	Inspect'd	Insanitary	Inspect'd	Insanitary	Inspect'd	Insanitary	Inspect'd	Insanitary	Inspect'd	Insanitary
Brunswick Wharf	1	...	...	...	1	...	...	...	...	...
Bullock's Dock	2	...	2	...	...	...	...	...	...	...
Calstock	3	1	1	1	...	...	...	...	2	...
Cawsand	56	...	9	...	13	...	22	...	12	...
Cattedown	73	9	32	4	17	3	9	...	15	2
Cattewater Harbour and Wharves	129	14	51	6	30	5	20	1	28	2
Devonport Dockyard	17	...	4	...	3	..	8	...	2	...
Devonport New Quay	14	1	2	...	3	...	5	...	4	1
Great Western Docks	1268	72	269	16	355	19	318	15	326	22
Gun Wharf	...	...	...	...	...	...	...	...	...	...
Keyham	12	1	5	...	2	1	3	...	2	...
Victoria Docks	393	18	99	4	105	3	81	6	108	5
Laira	29	5	4	1	5	...	13	3	7	1
Morwellham	...	...	...	...	...	...	...	..	...	...
Mutton Cove	2	...	1	..	..	...	...	...	1	...
Oreston	5	1	2	...	1	...	1	1	1	...
Richmond Walk	24	2	3	...	9	1	1	...	11	1
South Down	2	...	2	...	...	...	...	...	...	...
Sound	531	24	161	8	121	2	119	11	130	3
Stonehouse Pool, Creek and Wharves	85	3	13	...	30	1	20	1	22	1
Sutton Pool, Creek and Wharves	750	71	192	18	203	22	181	11	174	20
Saltash	3	1	2	1	...	...	...	...	1	...
Tamar Wharf	38	9	5	1	12	5	10	2	11	1
Torpoint	12	3	5	1	...	...	5	...	2	2
Turnchapel	7	2	2	..	3	1	1	1	1	...
Victualling Yard	...	...	...	...	...	...	...	...	...	...
Yealm	12	1	...	...	...	...	10	1	2	...
Totals	3468	238	866	61	913	63	827	53	862	61

TABLE II.—PLYMOUTH PORT SANITARY AUTHORITY.

Shewing the Number and Nationality of Vessels inspected during the Year 1909.

NATIONALITY.	Total Vessels for the year 1909.	For Quarter Ending.			
		March.	June.	September.	December.
British	3054	765	815	719	755
Austrian	..	..	..	..	..
Belgian	5	..	4	..	1
Brazilian	..	..	..	..	..
Danish	17	6	3	8	..
Dutch	39	13	8	10	8
French	93	32	21	19	21
German	130	18	35	42	35
Greek	..	..	..	..	..
Italian	12	4	3	4	1
Japanese	..	..	..	..	..
Norwegian	35	7	10	6	12
Portugese	..	..	..	..	..
Russian	23	6	..	6	11
Spanish	4	2	1	..	1
Swedish	10	2	1	3	4
United States	46	11	12	10	13
TOTALS ..	3468	866	913	827	862

TABLE III.—PLYMOUTH PORT SANITARY AUTHORITY.

Shewing the Number of Cases removed from Vessels for treatment during the Year 1909—Hospital Ship "Pique," &c.

DISEASE	Remaining from last year	Admitted	Discharged.	Died.	Remaining under treatment.
Small Pox	..	2	1	1	..
Scarlet Fever	..	*†5	5	..	..
Diphtheria	..	*1	1	..	..
Membranous Croup	..	..	..	..	..
Enteric or Typhoid Fever	..	..	..	..	..
Continued Fever	..	..	..	..	..
Erysipelas	..	..	..	..	..
Beri-Beri	..	‡3	2	1	..
Yellow Fever	..	..	..	..	..
Plague	..	..	..	..	..
Chicken Pox	..	..	..	..	..
Measles	..	..	..	..	..
TOTAL	..	11	9	2	..

*Cases admitted into the Infectious Disease Hospital of the Urban Sanitary Authority, at Mount Gould.

† Includes two Scarlet Fever removed for observation.

‡ Two cases admitted to S.D. & E.C. Hospital; One North Friary Nursing Home.

Table IV.—PLYMOUTH PORT SANITARY AUTHORITY.

Return of Vessels Inspected, Tonnage, Crew, Passengers arrivals, Sickness, Etc., from the Year 1891 *to* 1909.

Year.	Number of Vessels Inspected	Nationality.		Number of Crew on Board.	Register'd Tonnage.	Passengers.		Sickness.		Deaths.	Landed for Treatment under Port Auth'rity	Insanitary.	
		British	Foreign.			On Board.	Landing.	During Voyage.	Infectious.			No. of Vessels.	No. of Defects.
1891	2467	2185	282	20891	557039	..	..	35	6	..	5	166	..
1892	2798	2474	324	22178	579171	..	..	43	8	2	6	196	..
1893	3049	2762	287	27171	718571	..	..	46	10	2	10	202	..
1894	3110	2789	321	27680	730558	..	..	109	51	11	3	209	..
*1895	3012	..	..	..	..	..	..	207	63	35	3	196	..
1896	2904	2624	280	26069	685769	..	..	189	97	10	15	221	..
1897	2712	2469	243	43845	964535	..	..	509	100	43	13	227	..
1898	2667	2466	201	45642	929267	..	..	328	77	25	9	191	..
1899	2532	2321	211	40569	876884	..	..	211	83	43	7	186	..
1900	1271	1142	129	32674	729584	..	..	459	52	73	7	21	..
1901	2380	2208	172	47122	1168111	..	..	1963	35	85	3	71	..
1902	4045	3747	298	70224	1668307	89828	20793	3483	778	70	1	260	716
1903	4134	3740	394	71536	1780131	115730	22801	1023	119	60	5	279	920
1904	4338	3798	540	94504	2211848	154017	26887	871	151	71	6	317	1085
1905	4101	3667	434	97215	2065437	113167	22552	838	89	65	3	272	899
1906	3327	3025	302	93896	1994768	158903	30170	589	164	53	11	217	727
1907	3377	3036	341	106605	2235882	141880	26664	574	239	74	5	264	539
1908	3692	3253	439	123866	2723382	205586	31998	922	256	75	12	256	750
1909	3468	3054	414	113518	2526906	144685	31615	554	247	51	11	238	703

* Records Incomplete.

Summary of Work for the Year 1909.

Number of vessels inspected—British	...	...	3054
,, ,, ,, Foreign	...	...	414
			3468
Number of vessels insanitary ...	...	...	238
Number of Sanitary defects ...	...	...	693
Registered tonnage ...	...	...	2526906
Number of seamen on board ...	...	...	113518
Admitted to Hospital Ship "Pique"	...	...	2
Admitted to Borough Hospital ...	...	...	6

Detailed List of Sanitary Defects for the Year, 1909.

During the year 238 vessels were found to be in an insanitary condition, the following defects being notified to the Masters, Owners, or Agents:—

4	After Cabins to be thoroughly cleansed and painted.
18	Barricoes (water) to be cleansed inside or replaced by jars.
36	Bedding (sets of) to be thoroughly cleansed.
5	Bilges to be pumped out and cleansed.
43	Bunks to be thoroughly cleansed and painted.
3	Bulkheads (forecastle) to be made tight.
5	Chain lockers to be cleansed and limewashed.
8	Cookhouses to be cleansed and limewashed.
6	Cooking utensils to be thoroughly cleansed.
42	Cowls to be fitted and forecastles ventilated.
8	Deck in forecastle to be repaired and caulked.
6	Deck lights to be fitted or repaired.
8	Deck over crew's spaces to be caulked.
82	Forecastles to be cleansed, painted, or limewashed.
274	Carried forward.

274	Brought forward.
6	Funnels to stoves to be repaired and fixed independent of ventilator.
1	Fish (7 lbs.) voluntarily surrendered.
31	Food lockers to be built, or thoroughly cleansed.
5	Fish offal, refuse, and rubbish to be removed from crew's quarters.
1	Galley deck to be repaired.
2	Glass in skylight to be repaired.
1	Harness casks to be cleansed.
10	Hammocks to be scrubbed and cleansed.
12	Holds to be cleansed after discharging cargo.
9	Hatchways and lockers to be repaired and cleansed.
1	Hen coops to be cleansed and limewashed.
4	Lamps in forecastles to be repaired.
28	Louvres in hatchways to be freed from paint and repaired.
1	Pantry to be thoroughly cleansed.
1	Pig's pen to be thoroughly cleansed.
5	Potatoes (35 tons) voluntarily surrendered, taken to sea in barges and thrown overboard.
40	Rubber washers to be fitted to sidelights.
30	Sails and spare gear to be removed from forecastle and stowed in lockers fitted for the purpose.
15	Sidelights to be repaired.
23	Stoves in crew's quarters to be repaired or replaced.
41	Ventilators to be fitted in forecastle, freed from packing, or repaired.
78	W.C.'s to be thoroughly cleansed.
9	W.C.'s to be repaired or replaced.
3	Water lodging on top of water tanks to be removed.
16	Water barrels defective to be replaced by iron tanks.
25	Water barrels to be cleansed inside.
20	Water tanks to be cleansed inside.
11	Water pumped overboard from ship's tanks prior to vessels proceeding in docks in accordance with Article 22 Cholera Regulations 9th September, 1907.
703	Total.

The usual notices were given to remedy the defects, and were principally carried out at this Port.

In a few cases the vessels sailed prior to the defects being complied with. If, however the vessel proceeded to a home port, information was forwarded to the Port Medical Officer of the district to which the vessel was proceeding.

R. W. WEALE,
Port Sanitary Inspector.

Summary of Food Inspection

For the Seven Months ending 31st December, 1909.

Meat (Frozen and Chilled)	167½ tons.
Salt Beef	3 barrels.
Bacon	192 tons.
Pigs (whole carcases)	276
Poultry	15 boxes.
Dry Salted Cod	270 tons.
Wet do.	6 tons.
Cockles	37 sacks.

Vegetables and Fruit.

Potatoes	1716½ tons.
Onions	530¼ ,,
Onions (Spanish)	15 ,,
Carrots	35 ,,
Celery	10 cwts.
Gherkins	20 bags.
Garlic	3 cwt.
Parsnips	16½ tons.
Peas	4 ,,
Broccoli	1½ ,,
Horseradish	1 cask.
Tomatoes	24 tons.
Apples	37 tons.
Oranges	48½ ,,
Plums	16 ,,
Lemons	372 cases.
Pears	16¼ tons.
Melons	124 crates.
Grapes	8 tons.
Bananas	45 crates.
Medlars	28 lbs.
Sloes	414 cases.

Dry Fruit.

Plums	16¾ tons.
Candied Peel	1½ ,,
Raisins	7½ ,,
Dates	3¼ ,,
Muscatels	4 cwts.
Apricots	31 ,,
Currants	69½ tons.
Figs	12¼ ,,
Apples	10 cwts.
Sultanas	20¼ ,,
Pears	6 cwts.

Tinned Goods.

Tomatoes 241 cases.
Condensed Milk ... 554 ,,
Lunch Tongues 194 cwts.
Salmon 432 cases.
Sardines 4 tons.
Prawns 10 cases.
Lobster 10 ,,
Rabbit 1 case.
Asparagus 13 cases.
Corned Beef 21½ tons.
Pears 15 cases.
Pine Chunks 255 ,,

Nuts.

Almonds 21 cwts.
Barcelona 2 ,,
Chestnuts 506 sacks.
Walnuts 278 ,,
Cocoanuts 40 ,,

Miscellaneous.

Wheat 3960 tons.
Oats 1899 ,,
Oatmeal 2 tons.
Maize 7150 ,,
Rice 1104 bags.
Flour 1886 sacks.
Cornflour 190 cases.
Barley 1100 tons.
Macaroni 4 boxes.
Butter 67½ tons.
Margarine 18 cwts.
Lard 146¾ tons.
Lard Compound 18¼ ,,
Cooking Fat 20 ,,
Cheeses 2883.
Coffee Extract 277 cases.
Cocoanut Chips 19 ,,
Sauce 109 ,,
Golden Syrup 33½ tons.
Sugar 706¼ ,,
Jams 1¾ ,,
Confectionery 225 cases.
Pickles 157 ,,
Salt 632 ,,
Eggs 1369
Green Peas 30 ,,

The undermentioned articles being found unfit for food were condemned and surrendered for destruction by consent of the owners, thereby obviating formal proceedings before a Magistrate:—

Potatoes 3 cwts.
Carrots 10 ,,
Lemons 250.

Tinned Goods.

Salmon 1 tin.
Pine Chunks 1 ,,
Asparagus 1 ,,

HORACE R. SMITH,
Food Inspector.

Cases of sickness, &c., investigated by the Port Sanitary Authority Officials, or seen by the Port Medical Officer during the year 1909.

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
January 1	Moldavia ...	Sydney ...	4 cases (passengers), Malaria (convalescent).
,, 7	Adriatic ...	New York ...	1 case (passenger), Jaundice, proceeded in ship.
,, 8	Oceana ...	Bombay ...	1 death (crew), Tetanus, body buried at sea.
			5 cases (passengers and crew), 3 Malta Fever, 1 Diarrhœa, 1 Lobar Pneumonia, landed at Marseilles.
,, 13	Amerika ...	New York ...	1 case (passenger), Appendicitis, proceeded in ship.
,, 15	Himalaya ...	Sydney ...	1 death (passenger), Cardiac Disease, body buried at sea.
,, 16	Golconda ...	Calcutta ...	1 case (child), Whooping Cough, landed at Melbourne.
,, 16	St. Louis ...	New York ...	1 case (passenger), Measles, proceeded in ship.
,, 20	Falaba ...	West Coast ...	2 cases (passengers), Malaria (convalescent).
,, 22	Arabia ...	Bombay ...	6 cases (passengers), Malaria, proceeded in ship.
,, 23	Marathon ...	Sydney ...	1 case (passenger), Whooping Cough (convalescent).
,, 23	Oruba ...	Sydney ...	14 cases (passengers), 1 attempted Suicide, landed at Marseilles, 11 Impetigo Contagiosœ, 1 Dislocation of Shoulder, 1 Empyema and Tuberculosis, landed at Marseilles.
,, 23	Philadelphia ...	New York ...	1 death (child), Convulsions, body buried at sea.

CASES OF SICKNESS, &c.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
January 28	Aro ...	Cape Lopez ...	1 case (passenger), Insanity, landed for treatment.
,, 29	Mongolia ...	Bombay ...	2 cases (passengers), Glandular Enlargement (not Plague), proceeded in ship.
,, 29	Ruapehu ...	Wellington, N.Z. ...	1 death (passenger), Suicide by jumping overboard, body not recovered.
Feb. 1	Minnehaha ...	New York ...	1 case (passenger), Typhoid, proceeded in ship.
,, 1	Dover Castle ...	Delagoa Bay ...	3 cases (passengers), 1 Diphtheria, 1 Miner's Phthisis, 1 Tubercular Laryngitis, proceeded to ship.
,, 5	Geelong ...	Sydney ...	1 case (passenger), Laryngitis (convalescent).
,, 5	Marmora ...	Bombay ...	3 cases (passengers), 1 Malaria, 1 Pleurisy, 1 Septicæmia, proceeded in ship.
, 5	Omrah ...	Sydney ...	3 cases (passengers), 2 Malaria, 1 Hæmatemesis, proceeded in ship.
,, 13	St. Louis ...	Boulogne ...	1 death (crew), shock and immersion, having been washed overboard.
,, 13	Suevic ...	Sydney ...	2 cases (passengers), Phthisis, proceeded in ship.
, 13	India ...	Sydney ...	6 cases (passengers and crew), 2 Muscular Rheumatism, 1 Periostitis, 1 Lumbago, 1 Syphilis, 1 Pleurisy, proceeded in ship.
,, 18	Dunera ...	Calcutta ...	1 case (passenger), Ulcer of Leg, proceeded in ship.

CASES OF SICKNESS, &c.—*continued.*

Date. 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
Feb. 18	Dakar ...	Cameroons ...	3 cases (passengers), Malaria (convalescent).
,, 19	Persia ...	Bombay ...	3 cases (passengers), 2 Fever, 1 Bubo (convalescent).
,, 20	Cambarne ...	Treport ...	1 case (crew), Rheumatism, landed for treatment.
,, 23	Salamis ...	Brisbane ...	1 case (passenger), Septic Arm (convalescent).
,, 24	Oceanic ...	New York ...	1 case (passenger), Alcoholism, proceeded in ship.
,, 25	Jane Knox ...	Par ...	1 case (cook), Erythema, landed under medical treatment.
,, 27	St. Paul ...	New York ...	1 case (passenger), Acute Mania, proceeded in ship.
March 5	Waratah ...	Sydney ...	1 death (passenger), Heart Failure, body buried at sea.
,, 7	Amerika ...	New York ...	1 case (passenger), Whooping Cough, proceeded in ship.
,, 9	Burutu ...	Old Calabar	3 cases (passengers), Malaria (convalescent).
,, 11	Persic ...	Sydney ...	1 case (passenger), Insane, proceeded in ship.
,, 11	Adriatic ...	New York	1 case (passenger), Scarlet Fever, proceeded in ship.
14	Matiana ...	Calcutta ...	1 case (passenger), Enteric, landed at Madras for treatment.
17	Wallsend ...	Blyth ...	1 case (crew), Pneumonia, landed for treatment.

CASES OF SICKNESS, &c.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
March 18	Caledonia ...	Bombay ...	11 cases (passengers and crew), 6 Malaria, 1 Bubo, 1 Enteritis, 1 Gastritis, 1 Dysentery, 1 Hepatitis and Bubo, proceeded in ship.
,, 19	Pericles ...	Sydney ...	1 case (crew), Crushed Finger, proceeded in ship.
,, 20	Silver Eagle ...	St. Malo ...	1 case (mate), Rheumatism, landed for treatment.
,, 22	Karina ...	Forcados ...	2 deaths (passengers), 1 Heart Disease, 1 Sunstroke, bodies buried at sea.
			5 cases (passengers), Malaria (convalescent).
,, 24	Deccan ...	Iquique ...	1 case (master), Gout and Heart Trouble, landed for treatment.
,, 26	Mooltan ...	Sydney ...	1 case (passenger), Mumps, landed at Marseilles.
,, 27	St. Paul ...	New York ...	2 cases (passengers), 1 Rheumatism, 1 Pleurisy, proceeded to ship.
April 3	Egypt ...	Bombay ...	6 cases (passengers and crew), 3 Malaria, 1 Influenza (convalescent), 1 Abscess of Liver, 1 Chancre with Inguinal Glands, proceeded in ship.
,, 4	Commonwealth ...	Sydney ...	1 death (passenger), Heart Disease, body buried at sea.
			5 cases (passengers), Chicken Pox (convalescent).
,, 8	Ionic ...	Wellington, N.Z. ...	3 cases (passengers), 1 Cerebral Embolism, 1 Malignant Disease, 1 Pulmonary Tuberculosis

Cases of Sickness, &c.—*continued.*

Date, 1909	Ship's Name.	From Whence.	Nature of Sickness or Accident.
April 11	Dilwara ...	Calcutta ...	1 case (passenger), Small Pox, landed at Aden.
,, 14	Majestic ...	New York ...	1 death (passenger), Consumption, body buried at sea.
,, 15	Arabia ...	Bombay ..	1 case (passenger), Measles, proceeded in ship.
,, 16	Runic ...	Sydney ...	1 death (passenger), Pulmonary Tuberculosis, body buried at sea.
			3 cases (passengers and crew), 1 Spinal Injuries, 1 Compound Fracture and Dislocation of Arm, 1 Insane, proceeded in ship.
,, 16	Miltiades ...	Sydney ...	4 cases (passengers), 1 Mastoid Abscess, 1 Varicella, 1 Whitlow and amputation of finger, proceeded in ship, 1 Acute Phthisis landed for treatment.
,, 17	City of Calcutta . .	Bombay ...	1 case (passenger), Enteric, landed at Suez.
,, 21	Britannia ...	Bombay ...	6 cases (passengers), 3 Malaria, 1 Fracture, 1 Floating Kidney, 1 Metrorrhagia, proceeded in ship.
,, 22	Moldavia ...	Sydney ...	15 cases (passengers and crew), 8 Malaria, 7 Follicular Tonsillitis (convalescent).
,, 23	Macedonia ...	Shanghai ...	2 deaths (passengers), 1 Syncope, body buried at sea, 1 Embolism, body landed at this port.
			1 case (passenger), Mumps proceeded in ship.

CASES OF SICKNESS, &c.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
April 24	St. Paul ...	New York ...	2 cases (passengers), 1 Insanity, 1 Influenza proceeded in ship.
,, 24	Mombassa ...	Calcutta ...	5 cases (passengers and crew), 4 Injuries to Feet and Hands, 1 Malaria, proceeded in ship.
, 27	Dover Castle ...	Cape Town ...	2 deaths (passengers), 1 Endocarditis, 1 Acute Mania and Syncope, bodies buried at sea.
			3 cases (passengers), Chicken Pox, 1 landing at this port, 2 proceeding in ship.
,, 28	Nigeria ...	Old Calabar ...	14 cases (crew), Malaria (convalescent).
,, 30	Persia ...	Bombay ...	1 case (crew) suspected Plague, landed at Marseilles and died the following day.
May 5	Dakar ...	Old Calabar ...	2 cases (passengers), 1 Hæmoptysis, 1 Malaria (convalescent).
6	Athenic ...	Wellington, N.Z. ..	1 case (passenger), Acute Dysentery, proceeded in ship.
6	Golconda ...	Calcutta ...	3 cases (passengers), Chicken Pox, landing at Colombo, 2 proceeded in ship.

CASES OF SICKNESS, &C.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
May 7	Malwa ...	Sydney ...	2 deaths (passenger and crew), 1 Cancer of Stomach, body buried at Suez, 1 Heart Disease, body buried at sea.
			14 cases (passengers and crew), 1 Enteric, landed at Aden, 1 Ischio Rectal Abscess, proceeded in ship, 5 Malaria, and 7 Influenza (convalescent.
,, 10	Jason ...	Morlaix ...	1 case (crew), Diphtheria, landed for treatment at the Borough Hospital.
,, 12	Akabo ...	Forcados ...	2 deaths (passengers), 1 Suicide, 1 Malaria, bodies buried at sea.
,, 13	Morea ...	Bombay ...	1 case (passenger), Pneumonia, proceeded in ship.
,, 15	Medic ..	Sydney ...	14 cases (passengers and crew), 12 Phthisis, 1 Tonsillitis, proceeded in ship, 1 Appendicitis, landed at this port.
,, 15	Shad Thomas ...	Hull ...	1 case (officer), Crushed Foot, proceeded in ship.
,, 18	Moravian ...	Brisbane ...	1 case Pneumonic Phthisis, landed for treatment at the S.D. and E.C. Hospital.

CASES OF SICKNESS, &c.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
May 19	City of Karachi ...	Karachi ...	2 cases (passengers), 1 Appendicitis, 1 Paralysis, under medical treatment.
,, 26	Teutonic ...	New York ...	2 cases (passengers), 1 Rheumatic Fever, 1 Rheumatism, landed at this port.
,, 27	Caledonia ...	Bombay ...	2 deaths (passenger and crew), 1 Sprue, 1 Heat Exhaustion and Heart Failure, bodies buried at sea.
,, 28	Omrah ...	Sydney ...	2 deaths (passenger and crew), 1 Cerebral Congestion, 1 Intussusception and Convulsions, bodies buried at sea.
June 2	Kronprinzessin Cecilie ...	Tampico ...	1 case (passenger), Small Pox, removed to Hospital Ship, Plymouth Sound.
,, 3	Adriatic ...	New York ...	1 case (passenger), Pneumonia, landed at this port.
,, 4	Marmora ...	Sydney ...	7 cases (passengers), 5 Fever, 2 Tonsillitis (convalescent).
,, 6	Corinthic ...	Wellington, N.Z. ...	1 Death (passenger), Carcinoma of Liver, body buried at sea.

CASES OF SICKNESS, &c.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
June 6	Afric ...	Sydney ...	10 cases (passengers and crew), 1 Tuberculosis and Asthma, 1 Abdominal Colic, 3 Bronchitis, 2 Cardiac cases, 1 Gastric Ulcer, 1 Accident, first two proceeded in ship, remainder convalescent.
,, 11	Malwa ...	Lisbon and Madeira .	16 cases (passenger and crew), 12 Bronchial Catarrh, 1 Pleurisy, 1 Orchitis, 1 Poisoned Leg, 1 Cerebral Injury, the latter proceeded in ship.
,, 11	Egypt ..	Bombay ...	2 cases (passengers), 1 Pneumonia, landed at this port, 1 Phthisis, proceeded in ship.
,, 16	Oceanic ...	New York ...	1 death (passenger), Suicide), body buried at sea.
,, 14	Krorprinz Wilhelm ..	New York ...	1 death (child), General Weakness, body buried at sea. 1 case (child), Measles, proceeded in ship.
,, 19	India ...	Sydney ...	6 cases (passengers and crew), 3 Malaria, 1 Jaundice, 1 Pleurisy, 1 Morbus Cordis, proceeded in ship.
,, 20	Amarapoora ...	Rangoon ...	1 case (passenger), Valvular Disease of the Heart, landed at this port.

CASES OF SICKNESS, &C.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
June 23	Falaba ...	Forcados ...	6 cases (passengers), 1 Thrombosis Cerebral, 1 Appendicitis, 1 Consumption, 2 Heart Disease, 1 Ague (convalescent).
,, 23	Teutonic .	New York ...	1 case (passenger), Measles, proceeded in ship.
,, 29	Arawa ...	Wellington, N.Z. ...	3 cases (passengers and crew), 2 Delirium Tremens, 1 Adolescence Insanity, proceeded in ship.
,, 30	Adriatic ...	New York ...	1 death (crew), Pneumonia, body buried at sea.
			2 cases (passenger and crew), 1 Measles, 1 Pneumonia, proceeded in ship.
July 3	Suevic ...	Sydney ...	1 death (passenger), Phthisis, body buried at sea.
			3 cases (passenger), 2 Bronchitis, 1 Phthisis, proceeded in ship.
,, 6	Glassalt ...	Goole ...	1 case (crew), Injury to Knee, removed to S.D. and E.C. Hospital for treatment.
,, 7	Mendi ...	Forcados ...	3 cases (passengers), 1 Malaria and Enteric, 2 Malaria (convalescent).
,, 9	H. C. Anderson ...	Finland ...	1 case (crew), Hernia, removed to S.D. and E.C. Hospital for treatment.
,, 17	Mooltan ...	Sydney ...	1 death (passenger), Carcinoma of Stomach, body buried at sea.

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
July 18	Nyanza ...	Malta ...	1 death (passenger), Senile Decay, body buried at sea. 18 cases (passengers), Naval invalids removed to the R.N. Hospital for treatment.
,, 18	Salamis ...	Brisbane ...	1 case (passenger), Otitis Media with enlarged glands in neck.
,, 20	Dover Castle ...	Delagoa Bay ...	1 death (passenger), Phthisis, body buried at sea. 1 case (passenger), Stricture, landed at this port for treatment.
,, 24	Persia ...	Bombay ...	1 death (crew), Heart Failure, body buried at sea. 3 cases (passengers), 1 Venereal Bubo, 2 Naval invalids landed for treatment at the R.N. Hospital, Stonehouse.
,, 24	Rimutaka ...	Lyttelton ...	3 cases (passengers), 1 Pleurisy, 2 Bronchitis (convalescent).
,, 26	Kaiser Wilhelm der Grosse ...	New York ...	1 death (crew), Heat Apoplexy, body buried at sea.
,, 28	Adriatic ...	New York ...	1 case (passenger), Phthisis, proceeded in ship.
,, 31	Persic ...	Sydney ...	1 case (passenger), Chicken Pox, landed for treatment.

CASES OF SICKNESS, &c.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
July 31	China ...	Sydney ...	9 cases (passengers and crew), 1 Acute Diarrhœa, landed at Marseilles, 5 Malaria (convalescent), 3 Continued Fever (convalescent).
,, 31	St. Louis ...	New York ...	1 case (passenger), Chicken Pox, proceeded in ship.
,, 31	Pardo ...	River Plate ...	1 case (crew), Influenza (convalescent)
August 5	Pericles ...	Brisbane ...	1 death (passenger), Cardiac Disease, body buried at sea.
			1 case (passenger), Bronchitis, proceeded in ship.
,, 7	Himalaya ...	Bombay ...	4 cases (passengers and crew), 1 Bubo (not Plague) 1 Kala Azar, 2 Simple Continued Fever, proceeded in ship.
,, 7	Cleveland ...	Hamburg ...	1 death (child), Enteritis, body buried at sea.
,, 16	Mombassa ...	Calcutta ...	1 death (officer), Meningitis, body buried at sea.
			3 cases (crew), 2 Malaria, 1 Chancre (convalescent).
,, 19	Siam ...	Tocopilla ...	1 case (crew), Beri-Beri, proceeded in ship after medical treatment.
,, 20	Troja ...	Rosario ...	1 case (crew), Venereal (under medical treatment).

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
August 21	Egpyt ...	Bombay ...	12 cases (passengers and crew), 10 Malaria, 1 Dysentery, proceeded in ship, 1 Glandular Enlargements (not Plague) landed at this port.
,, 21	St. Paul ...	New York ...	1 case (crew), Typhoid, proceeded in ship
Septr. 4	Orontes ...	Brisbane ...	1 death (passenger), Angina Pectoris, body buried at sea.
,, 4	St. Louis ...	New York ...	1 death (passenger), Cerebral Embolism and Heart Clot, body landed for interment.
,, 4	Arabia ...	Bombay ...	1 case (crew), Venereal Bubo, proceeded in ship.
,, 4	Amerika ...	New York ...	1 case (passenger), Gastritis, landed for treatment, proceeding to London.
,, 7	Falaba ...	Forcados ...	3 cases (passengers), Malaria (convalescent).
,, 7	Frumentia ...	Viborg ..	1 case (crew), Rheumatism, under medical treatment.
,, 11	Mantina ...	Sydney ...	7 cases (passengers and crew), 4 Malaria, Rheumatism and Debility, 1 Vomiting and Debility, 1 Enteric, landed for treatment at Port Said.

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
Sept. 18	Oceana ...	Bombay ...	44 cases (passengers and crew), 26 Malaria (four proceeded in ship, remainder convalescent), 13 Influenza (eleven convalescent, two proceeded in ship), 1 Pleurisy and Pneumonia, 2 Appendicitis and 2 Colic (convalescent). 1 death (passenger), body buried at sea.
,, 21	Illtyd ...	Theodosia ...	2 cases (crew), 1 Heart Disease, 1 Pleurisy, under medical treatment.
,, 22	Athenic ...	Wellington, N.Z. ...	1 death (child), Meningitis, body buried at sea.
,, 25	Amrum ...	Archangel ...	1 case (crew), Appendicitis, landed for treatment at Tromso.
,, 25	Mongolia ...	Sydney ...	1 case (passenger), Apoplexy, proceeded in ship.
,, 25	Medic ...	Sydney ...	1 case (officer), Diphtheria, landed at Melbourne for treatment.
,, 25	New York ...	New York ...	1 case (crew), suspected Enteric, proceeded in ship.
,, 27	Dunera ...	Calcutta ...	4 cases (passengers and crew), 1 Rheumatism, 1 Gonorrhœa, 1 Wound in Leg, Peripheral Neuritis, under treatment.
,, 29	Blanca ...	Rosario ...	1 case (crew), Consumption, under treatment at this port.

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
Sept. 29	Majestic ...	New York ...	1 death (passenger), Pulmonary Hæmorrhage, body buried at sea.
Oct. 3	Caledonia ...	Shanghai ...	4 cases (passengers), 1 Pneumonia, 3 Malaria (convalescent).
,, 8	Marmora ...	Sydney ...	5 cases (passengers and crew), 2 Fever, 1 Bronchitis, 1 Debility, 1 Cerebral Hæmorrhage, proceeded in ship.
,, 8	Sola ...	San Nicolas ...	1 case (crew), Heat Stroke (convalescent).
,, 8	Morea ...	Sydney ...	2 cases (passenger and crew), 1 Chronic Rheumatism, 1 Dysentery, landed at Marseilles.
,, 13	Teutonic ...	New York ...	3 cases (passengers), Pertussis, proceeded in ship.
,, 14	Akabo ...	West Coast ...	3 cases (passengers), Malaria (convalescent).
,, 15	Persia ...	Bombay ...	20 cases (passengers and crew), Malaria (convalescent).
,, 18	Corinthic ...	Wellington, N.Z. ...	1 case (passenger), Insanity, proceeded in ship.
,, 22	Afric ...	Sydney ...	1 case (passenger), Malaria (convalescent).
,, 23	New York ...	New York ...	1 death (passenger), Delirium Tremens, body buried at sea.
			3 cases (crew), 1 Typhoid, 1 suspected Typhoid, 1 Scarlet Fever, proceeded in ship.
,, 25	Kaiser Wilhelm der Grosse ...	New York ...	1 death (passenger), Heart Failure, body buried at sea.

Cases of Sickness, &c.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
Oct. 27	Burutu ...	Forcados ...	3 cases (passengers) Malaria (convalescent).
,, 29	Egypt ...	Bombay ..	13 cases (passengers and crew), Malaria, 8 convalescent, 5 landing for treatment at this port.
Nov. 1	Marathon ...	Sydney ...	2 cases (passengers), 1 Bronchitis, 1 Gout, proceeded in ship.
,, 5	Mooltan ...	Sydney ...	5 cases (passengers and crew), 1 Pneumonia, 1 Chronic Nephritis, 1 Malaria, 1 Rheumatism, 1 Neurasthenia, proceeded in ship.
,, 12	Arabia ...	Bombay ...	10 cases (passengers and crew), 6 Malaria, 1 Rock Fever, 1 Concussion of Brain, 1 Hepatitis, 1 Chancre, proceeded in ship.
,, 16	Adriatic ...	New York ...	1 death (passenger), Phthisis, body buried at sea.
,, 16	Mantua ...	Bombay ...	5 cases (passengers), 1 Parturition, 1 Brights Disease, 1 Syphilis, 2 Insanity, proceeded in ship.
,, 20	India ...	Sydney ...	1 death (crew), Œdema, body buried at sea. 7 cases (passengers and crew), 1 Phthisis, 1 Œdema, proceeded in ship.
,, 22	Suevic ...	Sydney ...	1 case (passenger), Bronchial Pneumonia, proceeded in ship.

CASES OF SICKNESS, &c.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
Dec. 1	Oceanic ...	New York ...	1 case (passenger), Heart Disease and Bronchitis, landed at this port.
,, 1	Ruapehu ...	Wellington, N.Z. ...	1 case (passenger), injury to Knee Bone, landed at this port.
,, 3	China ...	Sydney ...	11 cases (passengers and crew), 2 cases Glandular Enlargements, 1 Acute Dysentery, 3 Febris, 2 Malaria, 2 Cardiac, 1 Mental Trouble, proceeded in ship.
,, 3	Salamis ...	Sydney ...	1 case (crew), Injury to Foot, proceeded in ship.
,, 5	Mombassa ...	Calcutta ...	4 cases (crew), 2 Malaria, 1 Bubo, 1 Abscess of foot, proceeded in ship.
,, 10	Maliva ...	Bombay ..	13 Cases (passengers and crew), 1 Dysentery, 2 Bronchitis, 5 Malaria, 1 Catarrh, 1 Orchitis, 1 Tonsillitis, 1 Phlebitis, 1 Bronchial Asthma, proceeded in ship.
,, 10	Mendi ...	Forcados ..	1 case (passenger), Small Pox (Confluent Hæmorrhagic), removed to Hospital Ship.
,, 11	St. Paul ...	New York ...	1 death (passenger), Heart Failure, body buried at sea.
			2 cases (passengers), 1 Tonsillitis, 1 Acute Rheumatism, proceeded in ship.

CASES OF SICKNESS, &c.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
Dec. 16	Adriatic ...	New York ...	1 death (passenger), Phthisis, body buried at sea. 2 cases (passengers and crew), 1 Ruptured Urethra, landed for treatment at the S.D. and E.C. Hospital, 1 case under observation for Appendicitis.
,, 17	Persic ...	Sydney ...	2 cases (passenger), 1 Pleurisy and Pneumonia, 1 Tonsillitis and Bronchitis, proceeded in ship.
,, 17	Macedonia ...	Sydney ...	5 cases (passengers), 1 Diarrhœa, 1 Tonsillitis. 1 Rheumatism, 1 Scalds, proceeded in ship.
,, 18	Nigeria ...	Calabar ...	1 death (passenger), Pneumonia, body buried at sea. 1 case (passenger, Abscess on Liver, landed for treatment at this port.
,, 18	Bass Rock ...	Callao ...	1 death (crew), Beri-Beri, body buried at sea. 5 cases (crew), 3 Beri-Beri, removed to Hospital for treatment, 1 Contusion of Finger, 1 Chest Trouble, under medical treatment on board.
,, 19	New York ...	New York ...	1 case (passenger), Erysipelas, proceeded in ship.

CASES OF SICKNESS, &c.—*continued.*

Date, 1909	SHIP'S NAME.	FROM WHENCE.	NATURE OF SICKNESS OR ACCIDENT.
Dec. 20	Kronprinzessin Cecilie ...	New York ...	1 case (passenger), Scarlet Fever, proceeded in ship.
,, 23	Orontes ...	Brisbane ...	1 death (chief engineer), Cerebral Hæmorrhage, body landed for interment.
,, 25	Osterley ...	London ...	5 cases (passengers), 3 Scarlet Fever, 2 Suspected cases, removed to the Borough Hospital.

Meteorological Observatory,
The Hoe,
Plymouth.
June 1910.

To the Chairman and Members of the
Sanitary Committee.

Gentlemen,

I have the honour of submitting my report upon the administration of the Meteorological Observatory during the year 1909, and also the result of the observations made of the various elements which together constituted the climate of Plymouth during the period under review.

The equipment of the station consists of the following instruments—Dine's Pressure Tube Anemometer, fixed on the top floor of Smeaton Tower and connected by tubes with the vane on the tower flag-staff. It records continuously the force of the wind from calm to hurricane. The information obtained is invaluable in salvage matters and in other questions arising through damage by the wind. The Bailey's Anemograph, fixed at the Observatory, records the direction of the wind, and combined with the Dine's recorder, completes statistics for salvage purposes. The Beckley and Halliwell's recording rain gauges register the slightest rainfall to the heaviest downpour, and the information is of the greatest importance in questions of flooding and in determining time lost by workmen owing to rain; many other matters can also be settled by these records. The pressure of the atmosphere is registered continuously by Richards' large Barograph fixed in the Observatory, and is of great assistance in determining the approach of storms and indicating periods of settled weather. The actual pressure is obtained by Adie's Marine Barometer, the readings of which are reduced for temperature and to sea level.

In conjunction with the recording rain gauges, a standard Meteorological Office pattern rain gauge, eight inches diameter, is used as a check, and the quantity of rain measured therein

is the standard upon which the rainfall of Plymouth is based. A similar rain gauge is fixed in Freedom Fields, and one five inches in diameter is fixed at Blackadon Asylum, and from the records obtained, the rainfall of the respective places is determined. The hours of sunshine are measured by a Campbell-Stokes Bright Sunshine Recorder fixed on the chimney of the Observatory, by it the sun's rays are focussed upon a card and leave a scorch; this is accurately measured each night, and the hours and minutes of sunshine carefully determined.

The temperature is obtained by Maximum and Minimum Thermometers and the Dry and Wet Bulb Thermometers, fixed in a Stevenson screen; from the readings of the latter the humidity is obtained.

The following complete the equipment:—Terrestrial and Solar Radiation Thermometers, Symon's Earth Thermometer, and Sea Temperature Thermometer. In October the instruments were examined and compared with Kew standards by Mr. T. W. Baker, of Kew Physical Laboratory, and the Beckly rain gauge was taken to pieces and cleaned.

The Dine's Pressure Tube Anemometer in the Smeaton Tower was found to be working unsatisfactorily, and as the Vane had been working for upwards of twelve years, it was decided to have the instrument completely overhauled. On being dismantled the following defects were discovered:—The steel pivot upon which the vane centred had become worn, and the collar was rubbing slightly against the shaft, and prevented the vane from revolving freely. The metal tubes which convey the air from the vane to recorder and exhaust had become elongated, and their bore slightly reduced. The most serious defect, however, was found in the float, which, during the previous month, had sprung a slight leak, caused by the solvent action of the water upon the solder, and necessitated this portion of the instrument being sent to the maker, and the whole of the joints and float were thoroughly repaired and cleaned. The instrument was out of action for a period of 14 days.

Whilst the Anemometer was out of action, the Anemograph, which is the complementary instrument, was taken down, as for a short time previously it was noticed that the vane did not act as freely as formerly, and on examination it was found that the ball bearings had worn indents in the gun-metal track, and this was improved by substituting a steel track. The character of the vane was also altered from the swallow tail type to single fan, which gives a much steadier record.

The usual daily reports and climatological tables were issued and weekly sunshine returns furnished to the local press. A table of sunshine hours was prepared each week from the Weekly Weather Report of thirty-one towns in the British and Channel Isles, setting out the hours of sunshine from January 1st to date, and at the end of the year Plymouth stood sixth with 1864 hours, which was 406 hours above the average of the British Isles. Great interest was taken in these statistics, and frequent enquiries were made for the returns.

The mean temperature for the year was 50.4 degrees, 0.4 degree below the average, and two degrees warmer than average of British Isles, and was only exceeded by the mean temperature of the Channel Islands.

Although the town was so favourably placed regarding sunshine and temperature, it must not be for one moment inferred that the summer heat was excessive, as the maximum temperature was only 83 degrees on August the 8th, and was exceeded at no less than 48 places, the highest record being 92 degrees at Epsom, whilst the lowest temperature was 25 degrees during the winter, compared with Zero at Balmoral and Marlborough, and one degree at Garforth, and was higher than 158 places.

The total rainfall was 35.2 inches, or 3.3 inch above the average of British Isles, whilst the number of wet days was sixteen less.

The work involved in taking the observations has been gradually increasing from year to year, owing to the desire to have

this station in the fore front of Municipal Observatories, and during the year observations were made three times each day—Sundays included—at the hours of 9 a.m., 3 p.m., and 9 p.m.

The total number of instrumental readings and other observations amounted to 17520 distinct records, and one half of these readings had to be corrected for index error, and other reductions and tabulations to standardise them with observations at other stations at home and abroad.

The important consideration now given by the Medical profession and public generally respecting the climatic advantages of various places, it is well to consider what position Plymouth occupies in this respect.

In the first place it is necessary to consider what are the chief factors which, together constitute Climate, and I venture to think it will be agreed that Sunshine, Temperature and Rainfall are the most important elements in arriving at a satisfactory determination.

To compare the Climate of one place with others, it is necessary to consider some statistics, but as such matter is somewhat uninteresting, it will be my endeavour to place before you as few figures as possible, so that the facts regarding the much maligned climate of Plymouth may be assimilated readily.

The statistics from which the following particulars are taken, are those published by the Meteorological Office, London, and the means and averages mentioned refer as regard Sunshine to 25 years, and those of Rainfall and Temperature for a period of 35 years.

	British Isles.	**Plymouth.**
Mean Annual Temperature	48·9 deg.	50·9 deg.
Mean Annual Rainfall	32·57 inches.	35·88 inches.
Average number Wet Days	197	181
Average Annual Sunshine	1458 hours.	1650 hours.

From this it is seen that Plymouth is favoured with mild temperature, being two degrees above mean, rainfall moderate, being only 3.31 inches above average, and 53.3 inches less than Glencarron, the highest in the Country; Sunshine plentiful,

192 hours above average, and 772 hours more than at Port Augustus, Scotland, and 584 hours more than at Newcastle.

I think Plymothians are to be congratulated in having such advantages in a country, the climate of which has been referred to by some wag as "non est," only fair samples of weather being experienced, and it is only for the above facts to be fully known, for the town to rank as one of the leading Health and Pleasure Resorts.

Particulars of the year's observations are set out in the following tables, together with remarks respecting them, and further comments here is unnecessary.

Before closing this report, I beg to tender to the Chairman and Members of the Committee, and to the Medical Officer of Health, my grateful thanks for the very kind consideration at all times given me, and I also desire to place on record my appreciation and thanks for the able assistance rendered by Messrs. Wills, Edwards, and Roach, also the Caretakers at Freedom Fields and Smeaton Tower, without which assistance the work could not have been accomplished.

I have the honour to be, Gentlemen,

Your obedient Servant,

H. VICTOR PRIGG, F. R. Met. Soc.,

Assoc. M. Inst. C.E.,

Borough Meteorologist.

Result of Observations made during the year 1909.

The Observatory is situated on "The Hoe," to the north of the Gardener's Lodge, and is in latitude 50° 21′ 44″ N.; longitude 4° 8′ 20″ W.; its altitude is 117 feet above mean sea level.

The barometer is a marine pattern by Adie, and is fixed 116 feet above sea level.

The thermometers are by Negretti and Zambra.

All readings of the barometer are corrected for index error.

Duration of bright sunshine is ascertained by a Campbell-Stokes' sunshine recorder.

The rain gauges are the Meteorological Office pattern, made of copper, and fixed 10 inches above the ground. Those at "The Hoe" and Freedom Fields are 8 inches in diameter, and fixed at 117 feet and 208 feet above mean sea level, respectively. The gauge at Blackadon Asylum (situate about thirteen miles east of Plymouth on the south-east border of Dartmoor) is five inches in diameter, and fixed at a height of 607 feet above sea level.

All the instruments were supplied through the Meteorological Office, and verified at Kew Observatory.

The observations were made thrice daily, at the hours of 9 a.m., 3 p.m., and 9 p.m., local time (Greenwich time, 9 hrs. 16 mins.).

The direction of the wind is taken to true and not magnetic bearings.

The averages which the results in the tables are compared with are as follows:—

Temperature		35 years 1871 to 1905
Sunshine		25 years 1881 to 1905
Rainfall		35 years 1871 to 1905

TABLE No. 1.—TEMPERATURE IN STEVENSON SCREEN.

1909.	Mean Temperature.	Difference from Average.	Means of		Mean Daily Range.	Absolute Temperature.			
			Maximum.	Minimum.		Maximum.	Date.	Minimum.	Date.
January	42·5	+0·4	47·5	37·4	1·5	52	11th	26	24th 25th
February	41·2	—1·5	46·4	35·9	10·4	53	3rd 4th	27	14th
March	41·7	—2·5	47·0	36·4	10·7	55	21st 23rd	25	5th
April	50·3	+1·9	56·7	43·8	13·0	72	9th	36	15th
May	53·6	+0·4	61·3	45·9	5·4	73	12th 20th	33	2nd
June	56·1	—2·7	62·9	49·2	12·9	73	17th	44	8th
July	60·2	—1·3	66·3	54·0	3·0	74	19th 20th	49	12th
August	62·9	+1·7	70·7	55·0	4·9	83	8th	47	22nd
September	56·2	—1·5	62·8	49·6	13·0	68	12th	43	3rd
October	53·6	+2·3	58·9	48·3	8·2	65	1st	30	31st
November	44·3	—2·3	50·1	38·4	11·4	59	5th	28	24th
December	42·5	—0·7	47·5	38·1	9·1	54	1st	25	20th
Means	50.4	—0·4	56·5	44·3	8·6	83	Aug. 8th	25	Mar. 5th Dec. 20th

REMARKS (TABLE No. 1).

Temperature of the Air.

The mean temperature of the air for the year was below the average—0.4 degree.

January, April, May, August and October, were warm months, the temperature being above the average. The greatest excess was 2.3 degrees in October.

During March, June, and November, the temperature was much below the average.

The warmest day was the 8th August, the shade temperature being 83.0 degrees, and the coldest the 5th March and 20th December, the minimum for these days being 25.0 degrees.

The warmest night temperature was 64.9 degrees on the 10th August, and coldest day temperature 36.0 degrees on the 23rd January.

TABLE No. 2.—ATMOSPHERIC PRESSURE.

1909.	Mean Pressure (at 32° F. and Station Level).	Highest.	Date.	Lowest.	Date.	Observed Monthly Range.
	inches.	inches.				
January	30·078	30·707	2nd	29·315	14th	1·392
February	30·026	30·568	14th	29·518	10th	1·050
March	29·392	30·074	12th	28·902	6th	0·984
April	29·864	30·448	2nd	29·551	22nd	0·897
May	29·982	30·393	2nd	29·581	26th	0·912
June	29·881	30·320	14th	29·253	22nd	1·067
July	29·911	30·238	19th	29·340	25th	0·898
August	29·934	30·177	4th	29·342	18th	0·835
September	29·930	30·281	3rd	29·732	6th	0 549
October	29·695	30·240	9th	29 035	26th	1·084
November	29.925	30·387	8th	29·327	14th	1.066
December	29·560	30·369	9th	28·760	4th	1·609
Means	29·849	30·707	Jan. 2nd	28·760	Dec. 7th.	Annual 1·947

REMARKS (TABLE No. 2)'

The extremes observed were 30.707 inches on the 2nd January, and 28.760 inches on the 7th December, giving a range of 1.947 inches.

The greatest monthly range occurred in December, and the least in September.

The Barometer was steadiest during the months of April and August, and fluctuated the most during January and December.

Table No. 3.—DURATION OF BRIGHT SUNSHINE.

1909.	Actual Sunshine (hours).	Percentage of Possible.	Difference from Average.	Greatest Daily Amount.	Percentage of Possible.	Sunny Days.	Sunless Days.
January	79·0	30	+28	7·30	83	16	15
February	129·0	47	+52	9·00	88	22	6
March	99·0	27	—33	8·68	70	20	11
April	172·0	42	+ 2	12·60	86	29	1
May	314·0	66	+93	14·27	91	27	4
June	194·0	40	—18	14·53	88	20	10
July	194.0	40	—17	13·77	82	18	13
August ..	257·0	58	+60	13·23	91	24	7
September	141·0	38	—14	10·88	84	19	11
October	107·0	33	— 1	9·55	88	16	15
November	127·0	43	+61	7·95	87	22	8
December	51·0	35	+ 1	6·45	85	23	8
Totals and Means ..	1864·0	42	+214	14·53 8th June.	88	256	109

REMARKS (TABLE No. 3).

Bright sunshine during the year was 214 hours above the average of 25 years—1881-1905. The greatest excess occurred during May, which month received 93 hours above the average.

During five months the sunshine was deficient.

The sunniest month was May, with 314 hours.

The greatest daily amount during the year was registered on the 8th June, with 14.53 hours.

The mean daily sunshine was 5.10 hours.

The sun shone on 256 days.

Table No. 4.—RAINFALL.

1909.	Total Rainfall.				Wet days or falls of 0·01 or more.			Greatest fall in one day.					
	The Hoe.		Freedom Fields.	Blackadon Asylum.	The Hoe.	Freedom Fields.	Blackadon Asylum.	The Hoe.		Freedom Fields.		Blackadon Asylum.	
	Rainfall.	Difference from Average.						Amount.	Date.	Amount.	Date.	Amount.	Date.
	inches.	inches.	inches.	inches.				inches.		inches.		inches.	
January ..	1·92	—1·65	2·24	3·27	18	17	19	0·30	12th	0·28	10th 12th 14th	0 75	10th
February ..	0·43	—2·36	0·57	1·06	5	6	6	0 32	9th	0·39	9th	0·58	9th
March ..	6 14	+3·64	5·97	9·13	26	27	29	1·48	5th	1·35	5th	1·52	5th
April ..	2·00	—0·34	1·90	2·94	16	16	15	0·45	19th	0·45	21st	0·91	22nd
May ..	1·00	—0·85	1·02	1·90	7	5	10	0·36	25th	0·37	25th	0·80	26th
June ..	3·05	+0·81	3·32	3·70	13	15	17	1·21	3rd	0·58	6th	1·24	3rd
July ..	3·73	+0 84	3·78	5·99	15	11	23	1·78	27th	1·66	27th	2·35	27th
August ..	2·02	—1 00	1·90	3·06	11	10	12	0·64	24th	0·59	24th	0·80	20th
September ..	0·89	—2·20	0·89	2·62	14	11	17	0·36	30th	0·34	30th	0 85	4th
October ..	6·59	+2·81	7·32	13·25	24	23	27	1 13	25th	1·22	25th	1·75	15th
November ..	1·33	—2·33	1·27	2·38	10	13	16	0·81	29th	0 66	29th	1·02	29th
December ..	6·14	+1·99	6·72	12·07	22	23	24	1·70	21st	1·72	21st	2·21	21st
Totals ..	35·24	—0·64	36·90	61·37	181	177	215	1·78	July 27th	1.72	Dec. 21st	2·35	July 27th

REMARKS (TABLE No. 4).

Remarks on the Rainfall.

During seven months the quantity registered was below the average, the driest month being February with a fall of 0.43 inch.

The mean wet-day rainfall for the year was 0.19 inch.

There were 181 wet days, or days with a rainfall of at least 0.01 inch at the Hoe, 177 wet days at Freedom Fields, and 215 wet days at Blackadon Asylum.

The greatest daily fall was 1.78 inch on 27th July, at "The Hoe"; 1.72 inch at Freedom Fields on 21st December, and 2.38 inch on 27th July at Blackadon Asylum.

TABLE No. 5.—AMOUNT OF CLOUD, RELATIVE HUMIDITY, AND GENERAL PHENOMENA.

1909.	Mean amount of Cloud.		Mean relative Humidity. Saturation-100.		Number of days observed.					
	9 a.m.	9 p.m.	9 a.m.	9 p.m.	Fog.	Snow.	Hail.	Clear Sky.	O'cast.	Thunder storms.
January	7·1	5·7	88	88	..	1	..	4	15	..
February	4·9	2·8	83	84	..	1	2	11	6	..
March	6·6	5·2	86	86	..	5	.	2	11	..
April	6·0	4·8	78	83	6	..	1	8	1	6
May	3·5	2·6	71	77	3	..	..	14	4	1
June	6·1	5·6	81	86	..	..	..	5	10	..
July	6·9	6.7	83	82	3	..	..	2	13	..
August	5·0	4·0	75	76	1	..	..	10	7	..
September	6·9	6·0	81	81	2	..	..	3	11	1
October	7·0	6·6	89	89	2	..	..	3	15	..
November	5·2	5·0	85	84	3	1	..	7	8	..
December	7·7	6·9	90	88	1	..	2	1	12	1
Means and Totals ..	6·1	5·2	82	83	21	9	5	70	123	9

REMARKS (TABLE No. 5).

Amount of Cloud, Relative Humidity, and General Phenomena.

The sky was clearest during May, and mostly overcast in December.

The air was driest during May, the mean Relative Humidity being 74. The driest air recorded was on 26th June, when it contained 39 per cent. of moisture. On 26 days during the year the moisture in the air was under 60 per cent.

Fogs were most prevalent during April.

Snow fell on nine days, and hail on five.

Thunderstorms occurred in April, May, September, and December.

TABLE No. 6.—DIRECTION OF WIND.

1909.	N. per cent.	N.E. per cent.	E. per cent.	S.E. per cent.	S. per cent.	S.W. per cent.	W. per cent.	N.W. per cent.	Calm per cent.
January	12	14	4	6	9	14	19	9	13
February	22	16	13	4	8	5	8	11	13
March	14	6	3	12	9	15	9	20	12
April	1	3	20	7	16	13	14	13	13
May	8	0	30	6	14	10	8	10	14
June	29	9	3	1	14	12	0	17	15
July	12	0	0	1	6	26	21	24	10
August	10	0	3	5	6	13	8	10	45
September	16	8	6	5	4	6	4	8	43
October	9	7	1	3	14	29	9	8	20
November	21	14	7	1	4	7	10	9	27
December	8	12	8	1	6	17	13	10	25
Means	13	8	8	4	9	14	10	12	22

REMARKS (TABLE No. 6).

The prevailing wind during the year was South-West.

45 per cent. of the winds were Westerly and Southerly, 33 per cent. were Easterly and Northerly, and 22 per cent. calm.

Gales occurred in January, March, April, May, October, and November.

The highest velocity was at the rate of 66 miles per hour on 7th of May.

TABLE No. 7.

Maximum in Sun; Minimum on Grass; Temperature of Earth and Sea Temperature.

1909.	Maximum in Sun. Black Bulb in Vacuo.			Minimum on Grass.			Earth Temperature 1 foot deep.			Sea Temperature in Plymouth Sound.		
	Mean,	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.
	°	°	°	°	°	°	°	°	°	°	°	°
January ..	72·6	90·5	44·0	..	..	..	42·4	46 6	36·4	49·4	53·4	47·5
February ..	83·2	100·5	54·6	28·4	47·6	16·4	39·4	45·0	36·5	47·5	49·3	46·0
March ..	89·0	109·0	48·0	29·7	47·9	12 0	41·0	47·6	35·1	46·2	49·1	44·8
April ..	109·1	130·8	73·8	38·3	48·4	25·4	49·5	53·5	44·4	49·3	51·4	47·4
May ..	114·5	124·2	76·0	40·5	51·1	24·7	55·4	61·8	49·4	52·5	53·6	49·9
June ..	112·8	134·6	68·0	44·3	53·4	37·3	57·9	61·2	52·9	55·4	57·9	52·7
July ..	118·3	129·8	74 2	51·0	58·7	43 6	63·2	68·2	59·0	60 4	63·7	58·1
August ..	119·3	128·8	78.1	51·3	61·7	42·6	65·5	69·2	60·0	60·6	63·8	56·9
September ..	106·9	122·2	76·6	43·1	57·3	32·6	57·3	65·6	54 0	58·1	62·8	57·9
October ..	95·1	115·3	60·0	35·4	57·7	17·4	55·1	59·2	44·0	56 7	58·3	54·6
November ..	79·3	98·4	50·0	31·4	44·7	18·4	45·7	53·2	36·8	52·0	56·6	48.5
December ..	70·7	84·6	47·0	35 1	46·8	17·9	43·2	50·2	36·8	47·1	49·8	45·0
Means ..	97·6	134·6	44·0	39·0	61·7	12·0	51·3	69·2	35·1	52·9	63·8	44·8
				11 months.								

REMARKS (TABLE No. 7).

Maximum in Sun; Minimum on Grass; Temperature of Earth, and Sea Temperature.

The sun's heat rays were greatest during August, and least during December; the absolute maximum was 134.6 degrees on 27th June.

The temperature on the ground was coldest during the month of February and warmest in August. The coldest temperature was registered on the 5th March, when it was 12.0 degrees.

The earth's temperature one foot below the surface reached its maximum on the 15th August, when it was 69.2 degrees, and was coldest on the 5th March, when it was 35.1 degrees. The earth was warmest during the month of August and coldest in February .

The sea was warmest during August and coldest in March, The maximum was 63.8 degrees on the 7th August, and minimum 44.8 degrees on 4th March.

APPENDIX I.

Mean Temperature, Sunshine and Rainfall at various Towns and Health Resorts in the British Isles.

TOWN.	Mean Temperature. 35 years.	Mean Daily Range. 35 years.	Average Annual Sunshine. 25 years.	Average Annual Rainfall. 35 years.
	o	o	Hours.	Inches.
PLYMOUTH	50·9	11·5	1650	35·9
Aberdeen	46·3	11·5	1401	30 7
Glasgow	47·1	10·8	1095	38·7
Durham	46·8	13·9	1317	27·2
York	48·1	14·3	1276	25·3
Blackpool	48·3	11·6	1409	33·8
Manchester	49·2	13·6	1134	35·2
Liverpool	48·9	10·6	..	28 8
Llandudno	49·9	10·7	1456	30·8
Pembroke	49 9	9·0	1642	35·1
Oxford	49·0	14·8	1498	25 0
Cambridge	48·9	16·7	1560	22·7
London	50·1	14·4	1140	24·2
Southampton	50·5	14·4	1665	30·9
Falmouth	51·0	8·9	1766	45·4
Armagh	47·7	12·9	1290	31·9
Dublin	49·9	12·7	..	28·0
Valencia	50·9	10·1	1457	56·5
Jersey	52·1	10·6	1927	34·2

APPENDIX II.

Mean Temperature, Sunshine and Rainfall at various Towns during year 1909.

TOWN.	Mean Temperature.	Mean Daily Range.	Hours Bright Sunshine.	Rainfall.	No. of Days.
PLYMOUTH ...	50·4	12·2	1864	35·2	181
Aberdeen	45·1	9·6	1305	30·4	212
Glasgow	46·5	10·7	1094	39 3	187
Durham	45·8	13·4	1339	24·8	182
York	47·5	13·6	1145	24·8	194
Blackpool	46·9	11·6	1652	35·5	198
Manchester... ...	48·4	10.8	999	37·0	191
Liverpool	47·9	9·9	1685	28.4	202
Llandudno	...	...	1611	32·0	208
Pembroke	49·0	8·9	1845	33·1	202
Oxford	48·2	14·2	1603	27 6	191
Cambridge	47·9	15·6	1686	23·1	181
London	49·5	12·9	1373	24·9	200
Southampton .	49·6	13 5	1748	36·1	182
Falmouth	50·4	9·0	1975	37·3	194
Armagh	47·3	13·3	1307	28·9	212
Dublin	49·4	11.9	1290	25·9	172
Valencia	50·1	9·2	1546	45·1	233
Jersey	51·2	11·8	1999	31·7	204

Causes of Death during the Year 1909, in the Borough of Plymouth—classified according to Diseases, Ages, and Localities.

CAUSES OF DEATH.	All Ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	WARDS. St. Peter's	Millbay	Hoe	St. Andrews	Vintry	Frankfort	Drakes'	Charles	Greenbank	Mutley	Compton	Laira	Friary	Sutton	Public Institutions (Residents)	Total Deaths in Public Institutions
Small-pox	...	...	...	...	.	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	1
Measles	52	15	36	1	...	...	...	9	2	1	2	5	5	4	1	3	2	2	4	8	3	1	1
Scarlet Fever	6	...	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	4	4
Whooping Cough	23	9	14	..	...	...	...	2	...	...	1	2	1	1	...	1	5	...	4	1	4	1	1
Diphtheria (including Membranous Croup)	19	...	15	4	...	...	...	...	...	...	...	...	1	...	...	1	2	1	1	...	1	12	12
Croup	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Fever — Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever — Enteric	8	...	...	...	4	4	...	...	...	...	...	2	...	...	1	...	...	...	...	1	...	4	5
Fever — Other Continued	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	15	...	...	1	1	6	7	...	1	...	1	...	1	1	...	1	...	3	2	3	2	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...
Diarrhœa	37	36	1	..	...	...	...	3	5	...	1	3	5	1	2	1	...	...	4	4	4	4	4
Enteritis	21	11	7	...	...	2	1	1	4	...	...	1	...	4	3	3	1	...	1	2	1	...	...
Gastritis	24	5	4	2	...	8	5	...	...	1	...	1	2	1	3	1	2	1	7	2	2	1	1
Puerperal Fever	6	1	...	...	1	4	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	4	4
Erysipelas	4	...	...	...	1	3	...	1	...	...	...	..	...	...	1	...	1	...	...	1	...	...	...
Phthisis (Pulmonary Tuberculosis)	119	1	...	8	25	81	4	20	7	7	5	4	6	5	9	2	6	4	10	6	8	20	26
Other Tuberculous Diseases	37	7	18	4	4	4	...	3	2	2	1	2	4	2	3	1	2	1	4	4	2	4	6
Cancer, malignant disease	118	...	1	...	1	76	40	7	3	10	3	6	7	9	6	4	8	10	14	7	6	18	25
Bronchitis	196	38	29	2	...	42	85	26	20	5	7	20	24	10	17	7	6	11	7	10	15	11	12
Pneumonia	132	23	40	4	2	37	26	11	6	7	4	15	9	11	9	6	9	9	7	8	12	9	10
Pleurisy	12	...	...	...	...	8	4	1	...	...	1	...	1	1	...	1	3	...	1	1	1	1	1
Other Diseases of Respiratory Organs	28	3	6	2	...	10	7	1	...	...	..	2	6	...	5	...	1	...	5	4	2	2	3
Alcoholism. Cirrhosis of Liver	12	...	...	...	...	7	5	...	2	2	...	...	3	1	...	1	...	1	2	...	...	...	...
Venereal Diseases	18	14	...	...	..	4	...	1	1	...	...	...	1	...	...	...	...	...	...	...	...	15	15
Premature Birth	50	50	...	...	...	...	...	4	2	5	1	6	3	2	4	...	2	1	5	8	6	1	1
Diseases and Accidents of Parturition	11	...	...	...	1	10	...	1	...	1	1	...	..	...	...	...	...	...	2	2	1	3	3
Heart Diseases	191	1	2	3	8	99	78	10	19	13	9	7	21	7	7	17	15	9	11	10	13	23	26
Accidents	42	11	4	5	3	11	8	1	5	2	...	1	3	...	1	1	1	2	5	3	4	13	15
Suicides	5	...	...	...	...	3	2	1	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Homicide	1	...	1	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2
All other causes	617	134	28	17	10	150	278	49	26	25	17	24	43	42	29	32	29	35	48	43	40	135	154
All Causes	1805	359	210	56	61	569	550	152	107	82	55	102	146	103	101	83	95	93	144	128	127	287	332

Cases of Infectious Disease notified during the Year 1909, in the Borough of Plymouth classified according to Disease and Localities.

Notifiable Disease.	Total Cases Notified	Total Cases Notified in each Locality. MUNICIPAL WARDS.														Public Institutions	Number of Cases removed to Hospital from each Locality. MUNICIPAL WARDS.													Public Institutions	Total Cases removed to Hospital.	
		St. Peter's	Millbay	Hoe	St. Andrew's	Vintry	Frankfort	Drakes'	Charles	Greenbank	Mutley	Compton	Laira	Friary	Sutton		St. Peter's	Millbay	Hoe	St. Andrew's	Vintry	Frankfort	Drakes'	Charles	Greenbank	Mutley	Compton	Laira	Friary	Sutton		
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diphtheria (including Membranous Croup ...	137	8	3	7	2	9	8	8	11	11	14	15	18	11	8	4	4	3	4	2	7	6	6	8	7	8	6	9	6	5	2	83
Erysipelas	146	7	6	4	3	14	4	12	5	9	4	5	16	25	22	10	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	2
Scarlet Fever	174	11	7	7	3	2	13	11	7	1	14	39	21	17	18	3	8	6	4	2	2	11	2	4	1	6	21	8	11	10	3	99
Typhus Fever	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...
Enteric Fever	29	...	4	1	...	2	...	3	2	...	5	2	1	3	...	6	...	4	1	...	1	...	3	1	...	3	2	1	1	...	4	21
Relapsing Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever ...	4	...	...	...	...	...	...	1	...	1	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	490	26	20	19	8	27	25	35	25	22	37	61	56	57	49	23	12	13	9	4	10	17	11	13	8	17	29	18	18	15	9	205

Vital Statistics of the Borough of Plymouth during the Year 1909 and previous Years.

Year.	Population estimated to Middle of each Year,	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				Under 1 Year of Age.		At all Ages.						
		Number.	Rate.	Number.	Rate per 1000 Births registered.	Number.	Rate.				Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1899	103,980	2982	28·6	566	189	2169	21·10	247	...	29	2198	21·14
1900	105,960	2849	26·8	498	174	2082	19 81	262	...	20	2102	19·84
1901	107,974	2889	26·7	434	150	1920	17·78	245	...	19	1939	17·84
1902	110,066	2957	26·8	460	155	1851	16.81	247	...	19	1870	16·99
1903	112,022	2847	25·4	413	144	1827	16.30	237	...	30	1857	16·57
1904	114,003	2888	25·3	500	173	2117	18·57	320	26	20	2111	18·52
1905	116,000	2956	25·4	405	137	1957	16.87	286	30	19	1946	16·77
1906	118 014	2821	23·9	436	154	1925	16.31	250	31	18	1912	16·20
1907	120,063	2777	23·1	306	110	1768	14 72	309	43	34	1759	14·65
1908	122,113	2712	22·2	351	129	1867	15·29	311	62	27	1832	15·00
Averages for years 1899-1908	113,019	2867	25·46	436	151	1948	17·35	271	...	23	1952	17·35
1909	124,180	2814	22·6	361	128	1843	14·84	314	56	18	1805	14·53

INFANTILE MORTALITY DURING THE YEAR 1909.

Deaths from stated Causes in weeks and months under One Year of Age.

CAUSE OF DEATH.	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-2 months	2-3 months	3-4 months	4-5 months	5-6 months	6-7 months	7-8 months	8 9 months	9-10 months	10-11 months	11-12 months	Total Deaths under 1 year.		
ALL CAUSES } Certified	63	21	25	21	130	42	28	24	21	26	11	14	13	15	15	22	361		
ALL CAUSES } Uncertified	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	...	...		
Common Infectious Diseases—																			
Small-pox	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	...	...		
Chicken-pox	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1		
Measles	...	...	...	...	...	...	...	...	...	...	1	1	2	2	2	4	3	15	
Scarlet Fever	...	...	...	...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	
Diphtheria : Croup	...	...	..	..	...	...	...	...	...	...	...	...	.	...	.	...	...	...	
Whooping Cough	...	...	..	...	...	...	...	2	1	1	...	1	...	..	...	1	3	9	
Diarrhœal Diseases—																			
Diarrhœa, all forms	...	...	...	...	4	4	3	2	2	4	7	1	3	3	4	1	2	36	
Enteritis (*not tuberculous*)	...	...	1	1	...	2	4	1	2	1	3	..	...	1	2	1	1	18	
Gastritis, Gastro-intestinal Catarrh	...	...	...	...	..	...	1	1	2	1	1	...	..	...	...	..	...	6	
Wasting Diseases—																			
Premature Birth	...	30	6	5	5	46	4	...	...	...	...	.	...	...	...	...	...	50	
Congenital Defects	...	4	1	..	1	6	...	...	...	...	..	...	...	...	...	...	..	6	
Injury at Birth	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	
Want of Breast-milk	...	...	...	.	...	...	...	...	...	..	...	..	.	...	...	..	..	...	
Atrophy, Debility, Marasmus	...	15	4	9	3	31	15	6	5	4	...	2	2	1	...	2	...	68	
Tuberculous Diseases—																			
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	1	..	...	...	..	...	1	
Tuberculous Peritonitis : Tabes Mesenterica	...	...	...	...	...	...	...	...	2	...	...	...	.	...	...	...	...	2	
Other Tuberculous Diseases	..	...	...	...	...	...	.	..	1	1	...	1	...	.	1	1	...	5	
Erysipelas	...	...	..	...	...	...	...	..	...	...	...	..	...	..	..	.	...	...	
Syphilis	...	1	2	...	..	3	5	3	2	...	...	1	...	...	...	...	...	14	
Rickets	..	...	..	..	...	...	...	..	.	.	1	..	...	...	...	...	..	2	3
Meningitis (*not tuberculous*)	..	...	...	..	..	...	...	..	..	...	1	...	1	...	...	.	...	2	
Convulsions	..	3	...	4	4	11	5	1	1	2	4	...	1	1	.	.	1	27	
Bronchitis	...	...	3	1	1	5	2	7	1	3	6	1	4	1	2	1	5	38	
Laryngitis	...	.	..	.	.	...	...	...	...	...	1	..	...	..	.	...	...	1	
Pneumonia	...	...	...	..	..	...	1		3	2	1	1	.	4	4	4	3	23	
Suffocation, overlying	...	2	1	2	1	6	...	2	1	...	...	...	...	...	...	.	...	9	
Other Causes	..	8	3	3	2	16	2	3	..	1	1	1	1	...	...	.	2	27	
TOTAL	...	63	21	25	21	130	42	28	24	21	26	11	14	13	15	15	22	361	

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